UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 14, 2022

Brien O'Loughlin
Tide International USA, Inc.
c/o Pyxis Regulatory Consulting Inc.
4110 136th St. Ct. NW
Gig Harbor, WA 98332

Subject: PRIA Label and CSF Amendment – Switching from 100% repack to formulated product.
Product Name: Tide MSM 60 DF Herbicide
EPA Registration Number: 84229-8
Application Date: August 20, 2021
Decision Number: 578025

Dear Brien O'Loughlin:

The amended label and Confidential Statement(s) of Formula (CSFs) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Please note that the record for this product currently contains the following CSF(s):

- Basic CSF dated 08/20/2021
- Alternate CSF 1 dated 08/20/2021
- Alternate CSF 2 dated 08/20/2021
- Alternate CSF 3 dated 08/20/2021

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or

distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Aswathy Balan at 202-566-2492 or at balan.aswathy@epa.gov.

Sincerely,

for

Heather McFarley
Product Manager 24
Fungicide and Herbicide Branch
Registration Division
Office of Pesticide Programs

[Note to reviewer: Text in [brackets] indicates optional text]

Tide MSM 60 DF Herbicide

METSULFURON METHYL	GROUP 2	HERBICIDE

ACTIVE INGREDIENT: Metsulfuron methyl: Methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate	60.0%
OTHER INGREDIENTS:	40.0%
TOTAL:	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information. For general information on this product, contact the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday, 8 AM to 12 PM PST, or at http://npic.orst.edu.	

[REFER TO INSIDE OF BOOKLET FOR PRECAUTIONARY STATEMENTS, STORAGE AND DISPOSAL, AND USE DIRECTIONS.]

EPA Reg. No. 84229-8 **EPA Est. No.**

Manufactured for:
Tide International USA, Inc.
21 Hubble
Irvine, CA 92618

Net Weight:

ACCEPTED
10/14/2022
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 84229-8

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Engineering Control Statements:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40CFR 170.240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

GROUNDWATER ADVISORY

Metsulfuron methyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of metsulfuron methyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

NON-TARGET ORGANISM ADVISORY
This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

WINDBLOWN SOIL PARTICLES
Tide MSM 60 DF Herbicide has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affects the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying Tide MSM 60 DF Herbicide if prevailing local conditions may be expected to result in off-site movement.

PHYSICAL OR CHEMICAL HAZARDS
Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency in your State responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to these statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT ENTER OR ALLOW WORKER ENTRY INTO TREATED AREAS DURING THE RESTRICTED-ENTRY INTERVAL (REI) OF 4 HOURS.

PPE required for early entry that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Non-crop industrial weed control, selective weed control in turf (industrial, unimproved only), and weed control in pastures and rangeland are not within the scope of the Worker Protection Standard.

Keep unprotected persons out of treated areas until sprays have dried.

IMPORTANT RESTRICTIONS
DO NOT USE ON FOOD OR FEED CROPS EXCEPT AS DIRECTED BY THIS LABEL. Injury to or loss of desirable trees or other plants may result if the restrictions listed below are not followed.

- **DO NOT** apply Tide MSM 60 DF Herbicide (except as specified), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend or in locations where the product may be washed or moved into contact with their roots.
- Prevent drift of spray to desirable plants.
- **DO NOT** contaminate any body of water, including irrigation water.
- **DO NOT** allow contact with fertilizers, insecticides, fungicides and seeds.
- **DO NOT** use spraying and mixing equipment used with Tide MSM 60 DF Herbicide for subsequent applications to food or feed crops with the exception of pastures, rangeland, and wheat, as low rates of Tide MSM 60 DF Herbicide can kill or severely injure most food or feed crops.

TANK MIXES
Tide MSM 60 DF Herbicide may be tank mixed with other herbicides registered for the use sites described in this label. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- **DO NOT** discharge excess material on the soil at a single spot in the field or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- When triple rinsing the pesticide container, be sure to add the rinsate to the spray mix.
- **DO NOT** apply this product through any type of irrigation system.

SPRAY EQUIPMENT
For specific application equipment, refer to the manufacturer's directions for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc. Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when the crop canopy is dense. Avoid swath overlapping, and shutoff spray booms while starting, turning, slowing, or stopping to avoid crop injury.

DO NOT make applications using equipment and/or spray volumes or under weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift, refer to the Spray Drift Management section of the label.

Continuous agitation is required to keep Tide MSM 60 DF Herbicide in suspension.

MIXING INSTRUCTIONS

1. Fill the tank ¼ to 1/3 full of water (if using liquid nitrogen fertilizer solution in place of water, refer to the Tank Mixtures sections for additional details).
2. While agitating, add the required amount of Tide MSM 60 DF Herbicide.
3. Continue agitation until the Tide MSM 60 DF Herbicide is fully dispersed, at least 5 minutes.
4. Once the Tide MSM 60 DF Herbicide is fully dispersed, maintain agitation and continue filling tank with water. Mix Tide MSM 60 DF Herbicide thoroughly with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly reagitate before using.
7. Apply Tide MSM 60 DF Herbicide spray mixture with 24 hours of mixing to avoid product degradation.
8. If Tide MSM 60 DF Herbicide and a tank mix partner are to be applied in multiple loads, preslurry the Tide MSM 60 DF Herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of Tide MSM 60 DF Herbicide.

DO NOT use Tide MSM 60 DF Herbicide with spray additives that reduce the pH of the spray solution to below 3.0.

SPRAYER CLEANUP

Spray equipment must be cleaned before Tide MSM 60 DF Herbicide is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined in “At the End of the Day” section of this label.

At the End of the Day

When multiple loads of Tide MSM 60 DF Herbicide are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of Tide MSM 60 DF Herbicide as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal. of household ammonia* (contains 3% active) for every 100 gal. of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat Step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution can be applied back to the crop(s) specified on this label. **DO NOT** exceed the maximum-labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

*Equivalent amounts of alternate-strength ammonia solution or a Tide International USA, Inc. approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or an Tide International USA, Inc. representative for a listing of approved cleaners.

Notes:

1. **Attention: DO NOT** use chlorine bleach with ammonia as dangerous gasses will form. **DO NOT** clean equipment in an enclosed area.
2. Steam-clean aerial spray tanks prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When Tide MSM 60 DF Herbicide is tank mixed with other pesticides, examine all required cleanout procedures and follow the most rigorous procedure.
4. In addition to this cleanout procedure, follow all precleanout guidelines on subsequently applied products as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of Tide MSM 60 DF Herbicide and applications of other pesticides to Tide MSM 60 DF Herbicide sensitive crops during the same spray season, use a sprayer that is dedicated to Tide MSM 60 DF Herbicide to further reduce the chance of crop injury.

MANDATORY SPRAY DRIFT

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.

- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, orient nozzles parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke

that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

WEED RESISTANCE MANAGEMENT

For resistance management, Tide MSM 60 DF Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Tide MSM 60 DF Herbicide and other Group 2 herbicides. Weed species with acquired resistance to Group 2 herbicides may eventually dominate the weed population if Group 2 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Tide MSM 60 DF Herbicide or other Group 2 herbicides. Users must scout before and after application.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

To delay herbicide resistance:

- Avoid the consecutive use of Tide MSM 60 DF Herbicide or other target site of action Group 2 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern (an herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides)
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Scout fields prior to application to identify the weed species present and their growth state to determine if the intended application will be effective.
- Scout fields after application to verify that the treatment was effective.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

Report any incidence of non-performance of this product against a particular weed species to your Tide International, USA, Inc. retailer, representative or call 949-679-3535. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemicals means to remove escapes, as practical, with the goal of preventing further seed production.

INTEGRATED PEST MANAGEMENT
This product can be used as a part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage.

IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.
PESTICIDE STORAGE: Store product in original container only. Store in cool, dry place.
PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container.

[(Nonrefillable plastic container ≤ 5 gallons): Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

[(Nonrefillable fiber drum with liner): Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment then offer for recycling if available or dispose of in a sanitary landfill or by incineration. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.]

[(Nonrefillable aluminum bag): Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration.]

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

Tide International USA, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Tide International USA, Inc., and Buyer and User assumes the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, TIDE INTERNATIONAL USA, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product in the event of ineffectiveness or other unintended consequences that may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Tide International USA, Inc. or Seller. To

the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Tide International USA, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, in no event shall Tide International USA, Inc. or Seller be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER AND BUYER, AND THE EXCLUSIVE LIABILITY OF TIDE INTERNATIONAL USA, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE, AT THE ELECTION OF TIDE INTERNATIONAL USA, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT, OR COMPENSATION LIMITED TO DAMAGES NOT EXCEEDING THE FAIR MARKET PURCHASE PRICE, AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Tide International USA, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of Tide International USA, Inc.

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Sword® and Salvo® are registered trademarks of Loveland Products Inc.
Aim® is a registered trademark of FMC Corp.
Everest® is a registered trademark of Arysta LifeScience North America
Maverick® is a registered trademark of the Monsanto Company.
Discover NG® is a registered trademark of Syngenta Crop Protection.
Arsenal® is a registered trademark of BASF Specialty Products.

EPA [EPA APPROVAL DATE]

WHEAT, BARLEY, FALLOW, PASTURES AND RANGELAND

Highlights

- For selective postemergence broadleaf weed control in winter and spring crops of wheat and barley, fallow, pastures, and rangeland.
- For land primarily dedicated to production of wheat, barley, pasture or rangeland (see Crop Rotation section for information).
- Can be applied by ground or by air.
- Use rates are 1/10 oz. (0.0038 lb ai) per acre in wheat and barley.
- Use rates are 1/10 to 4/10 oz. (0.0038 to 0.015 lb ai) per acre as broadcast treatment in pasture or rangeland. Spot treatments allow up to 3/4 oz. (0.0281 lb ai) per acre.
- No grazing restrictions on wheat, barley, pasture or rangeland.
- Applied one time per year, Tide MSM 60 DF Herbicide can be used in wheat and barley as follows:
    - In dryland crops – apply from 2-leaf stage, but before boot, except on Durum and Wampum varieties.
    - In Durum and Wampum varieties, apply only with 2,4-D at tillering stage but before boot.
    - In irrigated crops – apply at tillering stage but before boot.
    - As a harvest aid treatment with surfactant (or with 2,4-D + surfactant, or with Glyphosate containing herbicides) during dough stages up to 10 days before harvest.
- Apply one time per year to pasture or rangeland for annual weed and selective perennial weed and brush control in several varieties of pasture grasses (also see section on Application Timing).
- Consult label text for complete instructions. Always read and follow label Directions for Use.

APPLICATION INFORMATION

Use Tide MSM 60 DF Herbicide on land primarily dedicated to the production of wheat, barley, fallow, pasture and rangeland.

Tide MSM 60 DF Herbicide can be used on wheat, barley, fallow, pasture, and rangeland in most states. Check your state extension or Dept. of Agriculture before use to be certain Tide MSM 60 DF Herbicide is registered in your state. Tide MSM 60 DF Herbicide is not registered for use in Alamosa, Conejos, Costilla, Rio Grande and Saquache counties of Colorado.

Tide MSM 60 DF Herbicide is a dry-flowable granule that controls weeds in wheat (including durum), barley, fallow, pasture, and rangeland grasses. Tide MSM 60 DF Herbicide is mixed in water or can be preslurried in water and added to liquid nitrogen carrier solutions and applied as a uniform spray mix unless otherwise specified on this label. Tide MSM 60 DF Herbicide is non-corrosive, nonflammable, nonvolatile, and does not freeze.

Tide MSM 60 DF Herbicide controls weeds by postemergence activity. For best results, apply Tide MSM 60 DF Herbicide to young, actively growing weeds. The use rates depend upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- Weed spectrum and infestation intensity
- Weed size at application
- Environmental condition at and following treatment

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY
Tide MSM 60 DF Herbicide is absorbed through the foliage of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies.

Application of Tide MSM 60 DF Herbicide provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

Tide MSM 60 DF Herbicide may injure crops that are stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may be sensitive to treatment with Tide MSM 60 DF Herbicide under otherwise normal conditions. Treatment of such varieties may injure crops.

In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to Tide MSM 60 DF Herbicide.

Weed control may be reduced if rainfall or snowfall occurs soon after application.

Crop/Use	Maximum Product oz./A per single application	Maximum oz./A of product per year	Maximum Number of Applications per Year	Minimum Treatment Intervals (Days)	Pre-Harvest Interval (Days)
Dryland Wheat (including durum), Barley and Triticale	1/10 (0.0038 lb ai)	1/10 (0.0038 lb ai)	1	N/A	No grazing restrictions
Durum and Wampum Variety Spring Wheat	1/10 (0.0038 lb ai)	1/10 (0.0038 lb ai)	1	N/A	No grazing restrictions
Irrigated wheat and barley	1/10 (0.0038 lb ai)	1/10 (0.0038 lb ai)	1	N/A	No grazing restrictions
Wheat and Barley – Harvest Aid	1/10 (0.0038 lb ai)	1/10 (0.0038 lb ai)	1	N/A	10
Fallow	1/10 (0.0038 lb ai)	1/10 (0.0038 lb ai)	2	14	N/A
Pasture and Rangeland	**Broadcast Treatment:**	1 2/3 (0.063 lb ai)	See "Application Timing:	N/A	No grazing restrictions

	1/10 to 4/10 oz. (0.0038 to 0.015 lb ai) **Spot Application:** 1 oz. (0.0375 lb ai) per 100 gal. water. Not to exceed 3/4 oz (0.0281 lb ai) per acre.		Pasture Grasses" section below.		

Application Timing

Dryland Wheat, Barley and Triticale (Except Durum or Wampum Variety)
Make applications after the crop is in the 2-leaf stage but before boot. Make one application per year.

Durum and Wampum Variety Spring Wheat
Make applications after the crop is tillering but before boot. Make one application per year. Make application to durum and wampum varieties in combination with 2,4-D.

Irrigated Wheat and Barley
Make applications after the crop begins tillering but before boot. Delay first post-treatment irrigation for at least 3 days after treatment. **DO NOT** exceed 1 inch of water. Make one application per year.

Wheat and Barley – Harvest Aid
Make applications after the crop has reached the hard dough stage but no later than 10 days before harvest. See section on ***Tank Mixtures in Harvest Aid***.

Fallow
Tide MSM 60 DF Herbicide can be used as a fallow treatment, in the spring or fall when the majority of weeds have emerged and are actively growing.

DO NOT apply during boot or early heading, as crop injury may result.

Wheat, Barley, Triticale, and Fallow Restrictions:

- **DO NOT** exceed 1/10 oz (0.0038 lb ai) per acre per application.
- **DO NOT** exceed 1/10 oz (0.0038 lb ai) per acre per year.
- For wheat, barley, and triticale **DO NOT** make more than one application per year.
- For fallow, **DO NOT** make more than 2 applications per year.
- For fallow, **DO NOT** reapply within 14 days.
- For wheat and barley – harvest aid, **DO NOT** harvest within 10 days of application.

Pasture Grasses
Tide MSM 60 DF Herbicide can be used on some native grasses such as bluestems and grama, and on other pasture grasses such as bermudagrass, bluegrass, orchardgrass, bromegrass, fescue and timothy. Specific application information on several of these pasture grasses follows:

Pasture Grass	Minimum Time from Grass Establishment to Tide MSM 60 DF Herbicide Application
Bermudagrass	2 months
Bluegrass, Bromegrass, and Orchardgrass	6 months
Timothy	12 months
Fescue	24 months

Fescue Precautions and Restrictions:
Note that Tide MSM 60 DF Herbicide may temporarily stunt fescue, cause it to turn yellow, or cause seedhead suppression. To minimize these symptoms, observe the following precautions and restrictions:

Precautions:
- Tank mix Tide MSM 60 DF Herbicide with 2,4-D.
- Use the lowest labeled rate for target weeds.
- Use surfactant at ½ to 1 pt. per 100 gal. of spray solution (1/16 to 1/8% v/v).
- Make application later in the spring after the new growth is 5 to 6 inches tall, or in the fall.

Restrictions:
- **DO NOT** use a surfactant when liquid nitrogen is used as a carrier.
- **DO NOT** use more than 1/10 oz./A (0.0038 lb ai/A) Tide MSM 60 DF Herbicide.

The first cutting yields may be reduced due to seedhead suppression resulting from treatment with Tide MSM 60 DF Herbicide.

Timothy Precautions and Restrictions
Timothy must be at least 6" tall at application and be actively growing. Applications of Tide MSM 60 DF Herbicide to timothy under any other conditions may cause crop yellowing and/or stunting. To minimize these symptoms, observe the following precautions and restrictions:
Precautions:
- Tank mix Tide MSM 60 DF Herbicide with 2,4-D.
- Use the lowest labeled rate for target weeds.
- Use surfactant at ½ pt. per 100 gal. (1/16% v/v).
- Make applications in the later summer or fall.

Restrictions:
- **DO NOT** use surfactant when liquid nitrogen is used as a carrier.
- **DO NOT** use more than 1/10 oz./A (0.0038 lb ai/A) Tide MSM 60 DF Herbicide.

Application of Tide MSM 60 DF Herbicide to Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail may cause severe injury to and /or loss of pastures.

Other Pasture and Rangeland Grasses: Varieties and species of forage grasses differ in their tolerance to herbicides. When using Tide MSM 60 DF Herbicide on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage can be treated the following season. Broadleaf pasture species such as alfalfa and clover are highly

sensitive to Tide MSM 60 DF Herbicide and will be severely stunted or injured by Tide MSM 60 DF Herbicide.

Other Pasture and Rangeland Grasses Restrictions:

- **DO NOT** use more than 1/10 to 4/10 oz. (0.0038 to 0.015 lb ai) per acre per application when making broadcast applications.
- **DO NOT** use more than 1 oz. (0.0375 lb ai) per 100 gal. water when making spot applications.
- **DO NOT** exceed 3/4 oz (0.0281 lb ai) per acre per application when making spot applications.
- **DO NOT** exceed 1 2/3 oz (0.063 lb ai) per acre per year.
- **DO NOT** make more than 1 application per year.

WEEDS CONTROLLED

Unless otherwise directed, treat when weeds are less than 4" tall or in diameter and are actively growing.

Effectiveness may be reduced if rainfall occurs within 4 hours after application.

Cereals, Pasture, Rangeland, and Fallow
1/10 oz. (0.0038 lb ai) per acre

Blue/purple Mustard*	Miners Lettuce
Bur Buttercup (testiculate)	Pigweed (redroot, smooth, tumble)
Coast Fiddleneck (tarweed)	Plains Coreopsis
Common Chickweed	Prickly Lettuce*
Common Purslane	Russian Thistle*
Conical Catchfly	Shepherd's Purse
Cowcockle	Smallseed Falseflax
False Chamomile	Smartweed (green, ladysthumb, pale)
Field Pennycress (fanweed)	Snow Speedwell
Filaree	Tansymustard*
Flixweed*	Treacle Mustard (Bushy Wallflower)
Groundsel (common)	Tumble/Jim Hill Mustard
Henbit	Volunteer Sunflower
Kochia*	Waterpod
Lambsquarters (common, slimleaf)	Wild Mustard
Mayweed Chamomile	

Additional Weeds in Pasture/Rangeland Only
1/10 to 2/10 oz. (0.0038 to 0.0075 lb ai) per acre

Bitter Sneezeweed	Dandelion
Buttercup	Marestail
Carolina Geranium	Plantain
Common Broomweed	Wild Garlic*
Common Mullein	Woolly Croton*
Curly Dock	

2/10 to 3/10 oz. (0.0075 to 0.0112 lb ai) per acre

Annual Marshelder	Blackeyed Susan

Buckbrush **	Pensacola Bahiagrass*
Burclover	Purple Scabious
Common Yarrow	Western Snowberry**
Dogfennel	Wild Carrot
Horsemint (beebalm)	
Musk Thistle*	

4/10 oz. (0.015 lb ai) PER ACRE
Serecia Lespedeza*

WEEDS SUPPRESSED **
Cereals, Pasture, Rangeland, and Fallow
1/10 oz. (0.0038 lb ai) per acre

Canada Thistle*	Knotweed (prostrate)*
Common Sunflower*	Sowthistle (annual)*
Corn Gromwell*	Wild Buckwheat*

BRUSH SUPPRESSED**
3/10 oz. (0.0112 lb ai) PER ACRE

Blackberry	Multiflora Rose*
Dewberry	

WEED/BRUSH SUPPRESSED WITH SPOT APPLICATION
(Pasture/Rangeland Only)
1 oz. (0.0375 lb ai) per 100 gal. of water

Blackberry*	Dewberry*
Canada Thistle*	Multiflora Rose*

* See the Specific Weed Problems section
** Weed suppression is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

SPECIFIC WEED PROBLEMS
Note: Thorough spray coverage of all weed species listed below is very important.

Blue Mustard, Flixweed, and Tansymustard: For best results, apply Tide MSM 60 DF Herbicide tank mixtures with 2,4-D or MCPA in the spring after the majority of thistles have emerged and are small (rosette stage to 6” elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with the crop.

For Spot applications to Canada Thistle in pasture and rangeland, apply as a foliar spray once plant is fully leafed. Apply to runoff and include a surfactant in the spray mix at 1 to 2 qt per 100 gal of spray solution. Complete coverage of all foliage and stems is required for control. On tall, dense stands, it is often necessary to spray from both sides to obtain adequate coverage.

Corn Gromwell and Prostrate Knotweed: Apply Tide MSM 60 DF Herbicide plus surfactant when weeds are actively growing, are no larger than 2” tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D or MCPA with Tide MSM 60 DF Herbicide can improve results.

Kochia, Russian thistle, Prickly lettuce: Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use Tide MSM 60 DF Herbicide in a tank mix with Dicamba and 2,4-D, or bromoxynil and 2,4-D (such as ¾ -1 pt Buctril® + ¼ - 3/8 lb active 2,4-D ester). Apply Tide MSM 60 DF Herbicide in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the Tank Mixtures section of this label for additional details).

Sunflower (common/volunteer): Apply either Tide MSM 60 DF Herbicide plus surfactant or Tide MSM 60 DF Herbicide plus 2,4-D or MCPA after the majority of sunflowers have emerged, are 2" to 4" tall and are actively growing. Use spray volumes of at least 3 gal by air or 5 gal by ground (10 gal by ground in pastures).

Wild Buckwheat: For best results, apply Tide MSM 60 DF Herbicide plus 2,4-D or MCPA when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

Musk Thistle: Apply Tide MSM 60 DF Herbicide at 2/10 to 3/10 oz. (0.0075 to 0.0112 lb ai) per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Fall applications must be made before the soil freezes.

Multiflora Rose: For best control, apply Tide MSM 60 DF Herbicide as a broadcast application when multiflora rose is less than 3' tall. Application must be made in the spring, soon after multiflora rose is fully leafed.

For spot applications in pasture and rangeland, apply as a foliar spray once plant is fully leafed. Apply to runoff and include a surfactant in the spray mix at 1 to 2 qts per 100 gals of spray solution. Complete coverage of all foliage and stems is required for control. On tall, dense stands, it is often necessary to spray from both sides to obtain adequate coverage.

Blackberry and Dewberry: For spot applications in pasture and rangeland, apply as a foliar spray once plant is fully leaved. Apply to runoff and include a surfactant in the spray mix at 1 to 2 qts per 100 gals of spray solution. Complete coverage of all foliage and stems is required for control. On tall, dense strands, it is often necessary to spray from both sides to obtain adequate coverage.

Pensacola bahiagrass control in established Bermudagrass pasture:
Apply Tide MSM 60 DF Herbicide at 3/10 oz. (0.0112 lb ai) per acre plus surfactant. Apply after green-up in the spring but before bahiagrass seedhead formation. Application must be made when moisture is sufficient to enhance grass growth. Tide MSM 60 DF Herbicide is very effective for removal of bahiagrass from bermudagrass pastures. In highly infested pastures, the use of Tide MSM 60 DF Herbicide can clear the areas of useful forage until the bermudagrass has time to cover the area. Therefore, spread out Tide MSM 60 DF Herbicide treatments over a period of years. **DO NOT** apply to an entire farm or ranch in one year. Fertilization (particularly with nitrogen and potassium) and/or replanting may accelerate the process of reestablishment of bermudagrass.

Under heavy bahiagrass pressure, grazing pressure, or adverse weather conditions (heat and drought), bahiagrass regrowth may occur.

Serecia lespedeza: Apply Tide MSM 60 DF Herbicide at 4/10 oz (0.015 lb ai) per acre plus a surfactant at 1 to 2 qt per 100 gal of total spray solution. For best results, make applications to serecia lespedeza beginning at flower bud initiation through the full bloom stage of growth.

Wild Garlic: Apply 1/10 to 2/10 oz. (0.0038 to 0.0075 lb ai) per acre of Tide MSM 60 DF Herbicide in the early spring when wild garlic is less than 12" tall with 2" to 4" of new growth.

Woolly Croton: Apply 1/10 to 2/10 oz. (0.0038 to 0.0075 lb ai) per acre of Tide MSM 60 DF Herbicide in the late spring or early summer at preemergence through 2 true leaf stage.

Restrictions:

- **DO NOT** use Tide MSM 60 DF Herbicide for the control of common or Argentine bahiagrass.
- **DO NOT** apply Tide MSM 60 DF Herbicide in liquid fertilizer solutions for Pensacola bahiagrass control, as poor control and/or regrowth may occur.
- **DO NOT** make applications if drought conditions exist at intended time of application.

SPRAY ADJUVANTS
SURFACTANTS

Applications of Tide MSM 60 DF Herbicide must include either a nonionic surfactant or a crop oil concentrate. In addition, an ammonium nitrogen fertilizer can be used. Consult local fact sheets, technical bulletins and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with Tide MSM 60 DF Herbicide select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40CFR 1001).

Antifoaming agents may be needed. Consult your Ag dealer or applicator for a listing of surfactants.

Nonionic Surfactant (NIS)

- Apply 0.06 to 0.5% v/v (1/2 to 4 pints per 100 gallons of spray solution). See Tank Mixtures section for additional information.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

Exceptions: On all spring wheat and spring or winter barley use ½ to 1 quart per 100 gallons.

Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gallon per 100 gallon spray solution) or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

Ammonium Nitrogen Fertilizer

- Use 2 quarts/acre of a high quality urea ammonium nitrate (UAN) such as 28N or 32%N, or 2 pounds/acre of a spray-grade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 pounds/acre AMS under arid conditions.
- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution.

Special Adjuvant Types

- Combination adjuvant products can be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types can be used if they provide the same functionality and have been evaluated previously.

Antifoaming agents can be used if needed.

With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions can be used as a carrier in place of water. Run a tank mix compatibility test before mixing Tide MSM 60 DF Herbicide in fertilizer solution.

Tide MSM 60 DF Herbicide must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the Tide MSM 60 DF Herbicide is added. Use of this mixture may result in temporary crop yellowing and stunting.

If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at ¼ pt. per 100 gal. of spray solution (0.03% v/v).

When using high rates of liquid nitrogen fertilizer in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldman, or a Tide International USA, Inc. representative for specific information before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with Tide MSM 60 DF Herbicide and fertilizer mixture, ester formulations tend to be more compatible. (See manufacturer's label.) **DO NOT** add surfactant when using Tide MSM 60 DF Herbicide in tank mix with 2,4-D ester and liquid nitrogen fertilizer solutions.

Note: In certain areas east of the Mississippi river unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas consult your agricultural dealer, consultant, filed advisor, or Tide International USA, Inc. representative for specific information before using nitrogen fertilizer carrier solutions.

Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response.

Restrictions:

- **DO NOT** use low rates of liquid fertilizer as a substitute for a surfactant.
- **DO NOT** use with liquid fertilizer solutions with a pH less than 3.0.

GROUND APPLICATION

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flood nozzles on 30" spacings, use at least 10 gallons per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and pressure of at least 30 pounds per square inch (PSI). For 40" nozzle spacings, use at least 13 GPA; for 60" spacings use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With "raindrop RA" nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%. For flat-fan nozzle, use at least 3 GPA for applications to wheat or barley. Use at least 10 GPA for application to pasture or rangeland.

Use 50-mesh screens or larger.

AERIAL APPLICATION

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.
Wheat, Barley and Fallow – Use 1 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.
Pasture and Rangeland- Use 2 to 5 GPA.

When applying Tide MSM 60 DF Herbicide by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive

crops downwind and/or use ground equipment to treat the border edge of fields. See the **Spray Drift Management** section of this label.

TANK MIXTURES

Tide MSM 60 DF Herbicide can be tank mixed with other suitable registered Herbicides to control weeds listed under **Weeds Suppressed**, weeds resistant to Tide MSM 60 DF Herbicide, or weeds not listed under **Weeds Controlled**. Read and follow all label instructions on timing, precautions and restrictions for any companion products before using these tank mixtures. If those directions conflict with this label, **DO NOT** tank mix that product with Tide MSM 60 DF Herbicide.

Tank Mixtures in Cereals (Wheat, Barley and Triticale)

With 2,4-D (amine or ester) or MCPA (amine or ester)
Tide MSM 60 DF Herbicide can be used as a tank-mix treatment with 2,4-D or MCPA (ester formulations provide best results) Herbicides after weeds have emerged. For best results, use 1/10 oz. (0.0038 lb ai) of Tide MSM 60 DF Herbicide per acre; add 2,4-D or MCPA Herbicides to the tank at ¼ to ½ lb. active ingredient. Surfactant can be added to the mixture at ½ to 1 qt. per 100 gal. of spray solution; however, adding surfactant may increase the potential for crop injury.

Apply Tide MSM 60 DF Herbicide plus MCPA after the 3- to 5-leaf stage but before boot (with Durum and Wampum varieties **DO NOT** apply before tillering). Apply Tide MSM 60 DF Herbicide plus 2,4-D after tillering (refer to appropriate 2,4-D manufacturer's label), but before boot.

With Dicamba
For best results, apply Tide MSM 60 DF Herbicide at 1/10 oz. (0.0038 lb ai) per acre; add 1/16 to 1/8 lb. active ingredient dicamba. Surfactant can be added to the mixture at ½ to 1 qt. per 100 gal. of spray solution; however, adding surfactant may increase the potential for crop injury. Also refer to dicamba labels for application timing and restrictions.

With 2,4-D (amine or ester) and Dicamba
Tide MSM 60 DF Herbicide can be applied in a 3-way tank mix with formulations of dicamba and 2,4-D. Observe all applicable directions, restrictions and precautions on labels of all products used.

Make applications at 1/10 oz. (0.0038 lb ai) of Tide MSM 60 DF Herbicide + 1/16 - 1/12 pound active ingredient dicamba + 4-6 oz. active 2,4-D Ester or Amine per acre. Use higher rates when weed infestation is heavy. Add 1-2 pts. of surfactant to the 3-way mixture, where necessary, as deemed by local instructions. Use of additional surfactant may not be needed with the higher phenoxy rates and ester phenoxy formulations. Consult the specific 2,4-D or dicamba label, or local instructions for more information.

Apply this 3-way combination to winter wheat after the crop is tillering and prior to jointing (first node). In spring wheat (including Durum wheat) apply after the crop is tillering and before it exceeds the 5-leaf stage.

DO NOT apply this 3-way mixture at high rates more than once a year or more than twice per year at the low rates.

With Bromoxynil (such as Buctril® (EPA Reg. No. 264-437), Bronate® (EPA Reg. No. 264-690))
Tide MSM 60 DF Herbicide can be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley, or fallow. For best results, add bromoxynil containing Herbicides to the tank at 3 to 6 oz. active ingredient per acre.

With Starane® (Fluroxypyr-meptyl, EPA Reg. No. 62719-577)
For improved control of Kochia (2-4" tall), Russian thistle, mustard species, and wild buckwheat, Tide MSM 60 DF Herbicide can be tank mixed with 1/3 to 1 1/3 pints per acre of Starane® (Fluroxypyr-meptyl, EPA Reg. No. 62719-577).

With Starane® + Salvo® (Fluroxypyr-meptyl and 2,4-D, 2-ethylhexyl ester, EPA Reg. No. 34704-1010)
For improved control of Kochia (2-4" tall), Russian thistle, mustard species, and wild buckwheat, Tide MSM 60 DF Herbicide can be tank mixed with 2/3 to 2 2/3 pints per acre of Starane® + Salvo® (Fluroxypyr-meptyl and 2,4-D, 2-ethylhexyl ester, EPA Reg. No. 34704-1010).

With Starane® + Sword® (Fluroxypyr-meptyl and 2,4-D, dimethylamine salt, EPA Reg. No. 34704-1012)
For improved control of Kochia (2-4" tall), Russian thistle, mustard species, and wild buckwheat, Tide MSM 60 DF Herbicide can be tank mixed with 3/4 to 2 3/4 pints per acre of Starane® + Sword® (Fluroxypyr-meptyl and 2,4-D, dimethylamine salt, EPA Reg. No. 34704-1012).

With Maverick® (Sulfosulfuron, EPA Reg. No. 59639-223)
Tide MSM 60 DF Herbicide can be tank mixed with Maverick® (Sulfosulfuron, EPA Reg. No. 59639-223) herbicide for improved control of weeds in wheat.

With Aim® (Carfentrazone-ethyl, EPA Reg. No. 279-3241)
Tide MSM 60 DF Herbicide can be tank mixed with Aim® (Carfentrazone-ethyl, EPA Reg. No. 279-3241) herbicide for improved control of weeds in wheat and barley.

With Stinger® (Clopyralid, monoethanolamine salt, EPA Reg. No. 62719-73), Curtail® (2,4-D, triisopropanolamine salt and Clopyralid, monoethanolamine salt, EPA Reg. No. 62719-48) or Curtail® M (Clopyralid and MCPA, 2-ethylhexyl ester, EPA Reg. No. 62719-86) or Widematch® (Fluroxypyr-meptyl and Clopyralid, monoethanolamine salt, EPA Reg. No. 62719-512)
Tide MSM 60 DF Herbicide can be tank mixed with Stinger® (Clopyralid, monoethanolamine salt, EPA Reg. No. 62719-73), Curtail® (2,4-D, triisopropanolamine salt and Clopyralid, monoethanolamine salt, EPA Reg. No. 62719-48), or Curtail® M (Clopyralid and MCPA, 2-ethylhexyl ester, EPA Reg. No. 62719-86) herbicides for improved control of weeds in wheat and barley.

With EXPRESS® (Tribenuron-methyl, EPA Reg. No. 279-9578)
Tide MSM 60 DF Herbicide can be tank mixed with EXPRESS® (Tribenuron-methyl, EPA Reg. No. 279-9578) based on local information.

With HARMONY® EXTRA (Thifensulfuron and Tribenuron-methyl, EPA Reg. No. 279-9583)
Tide MSM 60 DF Herbicide can be tank mixed with HARMONY® EXTRA (Thifensulfuron and Tribenuron-methyl, EPA Reg. No. 279-9583) based on local information.

With Grass Control Products
Tank mixtures of Tide MSM 60 DF Herbicide and grass control products may result in poor grass control. Consult your state experiment station, university, or extension agent, agricultural dealer, or Tide International USA, Inc. representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of Tide MSM 60 DF Herbicide and the grass product to a small area.

With Puma (Fenoxaprop-p-ethyl, EPA Reg. No. 264-666)
Tide MSM 60 DF Herbicide can be tank mixed with Puma (Fenoxaprop-p-ethyl, EPA Reg. No. 264-666) herbicide for improved control of weeds in wheat and barley.

With Discover NG (Clodinafop-propargyl, EPA Reg. No. 100-1173)
Tide MSM 60 DF Herbicide can be tank mixed with Discover NG (Clodinafop-propargyl, EPA Reg. No. 100-1173) herbicide for improved control of weeds in spring wheat.

With Flucarbazone-sodium
Tide MSM 60 DF Herbicide can be tank mixed with flucarbazone-sodium herbicides for improved control of weeds in wheat and barley.

With Insecticides and Fungicides
Tide MSM 60 DF Herbicide can be tank-mixed or used sequentially with insecticides and fungicides registered for use on cereal grains.

However, under certain conditions (drought stress, cold weather, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of Tide MSM 60 DF Herbicide with organophosphate insecticides (such as parathion, “Di-Syston”) may produce temporary crop yellowing or, in severe cases, crop injury.

The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after applications.

Test these mixtures in a small area before treating large areas.

Restrictions:

- **DO NOT** apply Tide MSM 60 DF Herbicide within 60 days of crop emergence where organophosphate insecticide (such as “Di-Syston”) has been applied as an in-furrow treatment, as crop injury may result.
- **DO NOT** use Tide MSM 60 DF Herbicide plus Malathion, as crop injury will result.

Tank Mixtures in Harvest Aid
A tank mix of Tide MSM 60 DF Herbicide plus 2,4-D and surfactant, or glyphosate containing products, will typically aid in dry down of many broadleaved weeds, thereby aiding grain harvest. Make postemergence applications to actively growing weeds after the crop is in the hard dough stage. If weeds are not dry within 10 days after application, delay harvest until weeds are dry.

See weeds listed in Weeds Controlled chart of this label.

With 2,4-D
Use 1/10 oz. (0.0038 lb ai) Tide MSM 60 DF Herbicide plus ¼ to ½ active ingredient 2,4-D per acre on moderate weed infestations; higher rates of 2,4-D can be used on large weeds if permitted by the 2,4-D brand labeling. Include 1 to 2 qts surfactant per 100 gal of spray solution.

In addition to the weeds listed in the Weeds Controlled chart of this label, the 2,4-D combination will also dry down common cocklebur, marestail, puncturevine and common and wild sunflower. In areas where 2,4-D use is restricted, apply Tide MSM 60 DF Herbicide with surfactant only; however, this treatment may be less effective.

With Glyphosate Containing Products
Use 1/10 oz. (0.0038 lb ai) Tide MSM 60 DF Herbicide plus the locally specified rate of glyphosate containing products (refer to the glyphosate label for maximum seasonal rate). Tide MSM 60 DF Herbicide requires the use of adjuvant for optimum activity. Consult the glyphosate label or local directions for the amount of adjuvant to include.

Tank Mixtures in Fallow
Tide MSM 60 DF Herbicide can be used as a fallow treatment, and can be tank mixed with other herbicides that are registered for use in fallow. If those directions conflict with this label, **DO NOT**

tank mix that product with Tide MSM 60 DF Herbicide. Read and follow all label instructions on timing, precautions and restrictions for any companion products before using these tank mixtures. Follow the most restrictive labeling.

Tank Mixtures in Pastures or Rangeland

Tide MSM 60 DF Herbicide can be applied in a tank-mix combination with Grazon™ P+D (2,4-D, triisopropanolamine salt and Picloram, triisopropanolamine salt, EPA Reg. No. 62719-182), Picloram (such as Tordon® 22K (EPA Reg. No. 62719-6)), 2,4-D, Dicamba, or Weedmaster® (Dicamba and 2,4-D, dimethylamine salt, EPA Reg. No. 71368-34) in states where these products are labeled for postemergence control of the following weeds:

Annual marshelder	Common ragweed
Burclover	Giant ragweed
Carolina horsenettle	Prickly lettuce
Common cocklebur	Sunflower
Common milkweed	Western ragweed

For best results, apply Tide MSM 60 DF Herbicide at 1/10 to 2/10 oz (0.0038 to 0.0075 lb ai) per acre with one of the following products:

Product	**Rate (oz/A)**
Grazon™ P+D (2,4-D, triisopropanolamine salt and Picloram, triisopropanolamine salt, EPA Reg. No. 62719-182)	8 to 32
Picloram (such as Tordon® 22K (EPA Reg. No. 62719-6))	4 to 16
Weedmaster® (Dicamba and 2,4-D, dimethylamine salt, EPA Reg. No. 71368-34)	8 to 32
Triclopyr BEE (such as Remedy® (EPA Reg. No. 62719-70))	8
Triasulfuron	0.35*
2,4-D	16 to 32
Dicamba (such as Banvel® (EPA Reg. No. 70506-461) or Clarity® (EPA Reg. No. 7969-137))	4 to 32
2,4-D + Dicamba	1 + 2.87 to 4 + 11.48

* For suppression of Western Ragweed in Phenoxy Restricted and Herbicide Regulated Counties

Tide MSM 60 DF Herbicide WITH MCPA, 2,4-D AND/OR DICAMBA FOR SUPPRESSION OF WINTER ANNUAL BROADLEAF WEEDS IN WINTER WHEAT TO BE GRAZED OUT IN THE STATES OF TEXAS, OKLAHOMA, NEW MEXICO AND KANSAS

Tide MSM 60 DF Herbicide can be tank mixed with MCPA, 2,4-D and/or dicamba for suppression of winter annual broadleaf weeds in winter wheat to be grazed out and not harvested for grain, in the states of Texas, Oklahoma, New Mexico and Kansas.

Directions for Use
For the suppression of winter annual broadleaf weeds (such as henbit and mustards) in winter wheat in the states of Texas, Oklahoma, New Mexico and Kansas, tank mix Tide MSM 60 DF Herbicide at 0.05 (1/20) ounce (0.0018 lb ai) per acre with MCPA, 2,4-D and/or dicamba at label rates. Apply when winter annual broadleaf weeds are less than 1" tall or in the rosette stage for suppression. Add a Tide International USA, Inc. specified nonionic surfactant having at least 80% active ingredient at 1 to 2 qts. per 100 gal. of spray solution (0. 25 to 0.5% v/v).

Tide MSM 60 DF Herbicide can also be tank mixed at this rate with approved insecticides. This treatment can be applied by ground or air. However, under certain conditions (drought stress, cold weather, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of Tide MSM 60 DF Herbicide with organophosphate insecticides (such as parathion, "Di-Syston") may produce temporary crop yellowing or, in severe cases, crop injury. The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application. Test these mixtures in a small area before treating large areas. **DO NOT** use Tide MSM 60 DF Herbicide plus Malathion as crop injury will result.

Rotation Intervals for Crops in Non-irrigated Land Following Use of Tide MSM 60 DF Herbicide at 0.05 (1/20) Ounces (0.0018 lb ai) Per acre on Wheat That Will be Grazed Out

Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
Sorghum, Grain	7.9 or lower	No restrictions	4
Cotton	7.9 or lower	No restrictions	10
Alfalfa	6.8 or lower 6.9 to 7.9	No restrictions No restrictions	10 22
Beans, Dry	6.8 or lower 6.9 to 7.9	No restrictions No restrictions	10 22

Rotation Intervals for crops not covered above following the use of Tide MSM 60 DF Herbicide at 0.05 (1/20) ounces (0.0018 lb ai) per acre on wheat that will be grazed out.
The minimum rotation interval is 22 months with at least 18" of cumulative precipitation during the period:

- To any crop not listed in the rotation intervals table above
- If the soil pH is not in the specified range

To rotate to a crop at an interval shorter than directed, a field bioassay must be successfully completed to rotate to that crop. See section Field Bioassay in the EPA approved Tide MSM 60 DF Herbicide label for further information.

RESTRICTIONS

- **DO NOT** use this treatment for harvested grain. This treatment is for use on winter wheat that will be grazed out.

Tide MSM 60 DF Herbicide suppresses weeds by postemergence activity. For best results, apply Tide MSM 60 DF Herbicide to young, actively growing weeds. The degree and duration of suppression at 1/20 ounce (0.0018 lb ai) per acre may depend upon the following factors:

- Weed spectrum and infestation intensity
- Weed size at application
- Environmental condition at and following treatment

Refer to the Tide MSM 60 DF Herbicide and tank mix partner labels for additional use directions, restrictions, rotational crop intervals and precautions. The most restrictive provision on the applicable label shall apply. Read and follow all manufacturer label directions for the companion herbicides. If those directions conflict with this label, **DO NOT** tank mix the herbicide with Tide MSM 60 DF Herbicide.

GRAIN SORGHUM

APPLICATION INFORMATION
Use Tide MSM 60 DF Herbicide on irrigated or dryland grain sorghum in Colorado, Kansas, Nebraska, Oklahoma, and Texas (North of I-20).

Application Rates: Apply Tide MSM 60 DF Herbicide at 1/20 oz. (0.0018 lb ai) per acre plus ¼ lb. active ingredient 2,4-D amine per acre. **DO NOT** use surfactant or crop oil.

Crop Stage: For optimum performance and crop safety, apply Tide MSM 60 DF Herbicide plus 2,4-D amine when grain sorghum is 3 to 15 inches in height. If sorghum is taller than 10 inches to the top of the canopy, use drop nozzles and keep spray off the foliage. Apply only before the boot stage. Read and follow all other use instructions, restrictions and precautions on companion herbicide labels.

Sorghum varieties vary in sensitivity to 2,4-D amine. Spray only varieties known to be tolerant to 2,4-D amine. Contact seed company and Local County Extension Service for this information.

Pest Stage: Apply Tide MSM 60 DF Herbicide plus 2,4-D amine when all or a majority of the weeds have germinated and emerged. For best results, spray when weeds are less than 6 inches tall.

Weeds Controlled with Tank Mix of Tide MSM 60 DF Herbicide plus 2,4-D Amine:
Pigweed Species
Puncture Vine
Velvetleaf

Crop/Use	Application Timing	Maximum Product oz./A per single application	Maximum oz./A of product per year	Maximum Number of Applications per Year	Pre-Harvest Interval (Days)
Grain Sorghum (dryland or irrigated in the states Colorado, Kansas, Nebraska, Oklahoma, and Texas (North of I-20))	With 2,4-D when grain sorghum is 3 to 15 inches in height. If sorghum is taller than 10 inches to the top of the canopy, use drop nozzles and keep spray off the foliage. Apply only before the boot stage.	1/20 (0.0019 lb ai)	1/20 (0.0019 lb ai)	1	**DO NOT** use for forage or silage within 30 days of application

Apply Tide MSM 60 DF Herbicide to grain sorghum by properly calibrated ground or aerial equipment.

Ground Application: Apply uniformly by ground with a properly calibrated low pressure (20-40 PSI) boom sprayer equipped with flat fan nozzles. Use 10-30 GPA with ground equipment.

Aerial Application: Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 2 to 5 GPA. **DO NOT** apply during inversion conditions, when winds are gusty, or when other conditions will favor poor coverage and/or drift.

Tide MSM 60 DF Herbicide can be used on either dryland or irrigated grain sorghum. If application is made to irrigated sorghum, delay first post-treatment irrigation for at least 3 days after treatment. **DO NOT** exceed 1" at the first post-treatment irrigation.

Use cultivation prior to Tide MSM 60 DF Herbicide + 2,4-D amine treatment to cover exposed brace roots of grain sorghum to minimize injury from 2,4-D amine.

PRECAUTION

- Temporary crop yellowing and/or stunting may occur soon after application, especially when crop is under stress conditions.

RESTRICTIONS

- **DO NOT** exceed 1/20 oz (0.0019 lb ai) per acre per application.
- **DO NOT** exceed 1/20 oz (0.0019 lb ai) per acre per year.
- **DO NOT** exceed one (1) application per year.
- **DO NOT** use on grain sorghum grown for seed production or syrup. **DO NOT** use on forage sorghum.
- **DO NOT** use for forage or silage within 30 days of application.
- **DO NOT** include surfactant or crop oil to the tank mix.
- **DO NOT** apply this treatment under cold, wet weather conditions or to grain sorghum growing under stress caused by weather, insects or disease as crop injury may result.
- **DO NOT** apply to long season grain sorghum varieties or grain sorghum that is planted after July 1, as crop injury or delayed maturity may occur.
- Tide MSM 60 DF Herbicide must be used with 2,4-D; in areas where 2,4-D use is restricted, follow requirement of the restriction. If 2,4-D use is prohibited, **DO NOT** use Tide MSM 60 DF Herbicide on grain sorghum.

CROP ROTATION

Before using Tide MSM 60 DF Herbicide, carefully consider your crop rotation plants and options. For rotational flexibility, **DO NOT** treat all of your wheat, barley, triticale or fallow, pasture or rangeland acres at the same time.

Minimum Rotational Intervals

Minimum rotational intervals* are determined by the rate of breakdown of Tide MSM 60 DF Herbicide applied. Tide MSM 60 DF Herbicide breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Tide MSM 60 DF Herbicide breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Tide MSM 60 DF Herbicide breakdown.

Of these three factors, only soil pH remains relatively constant. Soil temperature, and, to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, monitor soil temperatures and soil moisture regularly when considering crop rotations.

*The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

Soil pH Limitations

DO NOT use Tide MSM 60 DF Herbicide on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, Tide MSM 60 DF Herbicide could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Tide MSM 60 DF Herbicide.

Checking Soil pH

Before using Tide MSM 60 DF Herbicide, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0” to 4” samples from different areas of the field and analyze them separately. Consult your local extension publications for additional information on specific soil sampling procedures.

BIOASSAY

A field bioassay must be completed before rotating to any crop not listed (see the Rotation Intervals table), or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table, or if the minimum cumulative precipitation has not occurred since application.

Field Bioassay

To conduct a field bioassay, grow test strips of the crop or crops you plan to grow the following year in fields previously treated with Tide MSM 60 DF Herbicide. Crop response to the bioassay will indicate whether or not to rotate to the crop(s) grown in the test strips.

If a field bioassay is planned, check with your local agricultural dealer or a Tide International USA, Inc. representative for information detailing the field bioassay procedure.

ROTATION INTERVALS FOR CEREALS

All Areas – Following Use of Tide MSM 60 DF Herbicide at 1/10 oz. (0.0038 lb ai) per Acre

Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
Winter and Spring Wheat	7.9 or lower	No restrictions	1
Durum Wheat, Barley, Spring/Winter Oat	7.9 or lower	No restrictions	10

ROTATION INTERVALS FOR CROPS IN NON-IRRIGATED LAND

Following use of Tide MSM 60 DF Herbicide at 1/10 oz. (0.0038 lb ai) per acre on Wheat, Barley, Triticale or Fallow

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	County or Area				
Colorado	Statewide	Grain sorghum, Proso Millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Field corn	7.9 or lower	15	12
		IR Corn	7.9 or lower	No restrictions	4
		STS Soybeans	7.9 or lower	No restrictions	4
Idaho	Southern Idaho	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Statewide	Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
		Condiment mustard	7.3 or lower	10	10
		Condiment mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34
Kansas	Statewide	Grain sorghum Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Central and Western Kansas (west of the Flint Hills)	Field corn	7.9 or lower	15	12
		IR Corn	7.9 or lower	15	4

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	**County or Area**				
	Central Kansas; generally E of Hwy. 183 and W of the Flint Hills	Soybeans	7.9 or lower	15	12
		STS Soybeans	7.9 or lower	15	4
	Western Kansas, W. of Hwy. 183	Soybeans	7.5 or lower 7.6-7.9	22 33	22 34
Montana	Statewide	Grain sorghum, Proso millet, Field corn	7.9 or lower	22	22
		Alfalfa (hay only)	7.6-7.9	No restrictions	34
			7.5 or lower	No restrictions	22
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
Nebraska	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		IR Corn STS Soybeans	7.9 or lower	No restrictions	4
	Generally W. of Hwy. 77 and E of the Panhandle	Field corn	7.9 or lower	15	12
		Soybeans	7.5 or lower	22	22
			7.6 – 7.9	33	34
New Mexico	Statewide	Grain sorghum Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower Sunflower	7.9 or lower	No restrictions	22
	Eastern New Mexico	Cotton (dryland Only)	7.9 or lower	30	22
North Dakota	W. of Hwy. 1	Grain sorghum, Proso millet, Field corn, Dry beans, Flax, Safflower, Soybean, Sunflower	7.9 or lower	22	22
	E. of Hwy. 1	Grain sorghum, Proso millet, Field corn, Dry beans, Flax, Safflower, Soybean, Sunflower	7.9 or lower	34	34

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	**County or Area**				
Oklahoma	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		IR Corn STS Soybeans	7.9 or lower	No restrictions	4
		Field corn	7.9 or lower	15	12
	Panhandle	Cotton (dryland only)	7.9 or lower	30	22
	E. of the Panhandle	Cotton (dryland only)	7.9 or lower	25	14
Oregon	Statewide	Condiment mustard	7.3 or lower	10	10
		Condiment mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34
		Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
South Dakota	Statewide	Flax, Safflower, Soybean, Sunflower	7.9 or lower	No restrictions	22
	S. of Hwy. 212 & E. of the Missouri River, & S. of Hwy. 34 & W. of Missouri River.	Grain sorghum, Proso millet	7.9 or lower	13	12
	Generally E. of Missouri River & S. of Hwy. 14, & W. of Missouri River	Field corn	7.9 or lower	15	12
Texas	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax Safflower Soybean, Sunflower	7.9 or lower	No restrictions	22
	Panhandle	Field corn	7.9 or lower	15	12
		Cotton (dryland only)	7.9 or lower	30	22
	N. Central Texas*	Field corn	7.9 or lower	15	12
		Cotton (dryland only)	7.9 or lower	25	14

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	**County or Area**				
	* The counties of N. Central Texas are: Archer, Baylor, Bell, Bosque, Bowie, Callahan, Camp, Cass, Clay, Collin, Cooke, Coryell, Dallas, Delta, Denton, Eastland, Ellis, Falls, Fannin, Foard, Franklin, Grayson, Hardeman, Haskell, Hill, Hood, Hopkins, Hunt, Jack, Johnson, Kaufman, Knox, Lamar, Limestone, McLennan, Milam, Montague, Morris, Nafarro, Palo Pinto, Parker, Rains, Red River, Robertson, Rockwall, Shackelford, Somervell, Stephens, Tarrent, Throckmorton, Titus, Upshur, Van Zandt, Wilbarger, Wichita, Williamson, Wise, Wood, Young				
Washington	Statewide	Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
		Condiment mustard	7.3 or lower	10	10
		Condiment mustard	7.4 or higher	28	34
		Chickpeas	7.3 or lower	10	10
		Chickpeas	7.4 or higher	28	34
Utah	Statewide	Flax Safflower Sunflower	7.9 or lower	No restrictions	22
Wyoming	Statewide	Flax Safflower Sunflower	7.9 or lower	No restrictions	22
	Southern Wyoming	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
	Southern Wyoming (Goshen, Laramie, and Platte counties only)	Field corn	7.9 or lower	15	12
	Northern Wyoming	Grain sorghum, Proso millet, Field corn	7.9 or lower	22	22

Rotation Intervals not covered above- The minimum rotation interval is 34 months with at least 28” of cumulative precipitation during the period:

- To any major field crop not listed (See the Rotation Intervals table)
- If the soil pH is not in the specified range
- If the use rate applied is not specified in the table
- Or if the minimum cumulative precipitation has not occurred since application.

To rotate to a major field crop at an interval shorter than specified, a field bioassay must be successfully completed to that crop. A field bioassay must be successfully completed before rotation to any minor crops (as determined by the USDA criteria). See section on Field Bioassay for further information.

RECROPPING INTERVALS FOR GRASSES ON CONSERVATION RESERVE PROGRAM (CRP)

Whenever Tide MSM 60 DF Herbicide has previously been used in wheat, barley, triticale or fallow, the following grasses can be planted after the intervals specified in the tables below.

Bentgrasses
Blue grama

Bluestems – Big, Little, Plains, Sand, WW Spar
Buffalograss
Galleta
Green needlegrass
Green sprangletop
Indian ricegrass
Lovegrasses – Sand, Weeping
Orchardgrass (excluding Paiute)
Prairie sandreed
Sand dropseed
Sheep fescue
Sideoats grama
Switchgrass
Wild ryegrasses – Beardless, Russian
Wheatgrasses – Crested, Intermediate, Pubescent, Slender, Streambank, Tall, Thickspike, Western

ROTATION INTERVALS

MN, MT, ND, SD and Northern WY:

Soil pH	Use Rate ounces/Acre (lb ai/Acre)	Minimum Interval for Planting Grasses
7.5 or lower	1/10 (0.0038)	4 months (all grasses)
7.6 to 7.9	1/10 (0.0038)	4 months (Wheatgrasses only)

AR, CO, ID, KS, LA, NE, MN, OK, OR, TX, UT, WA, Southern WY:

Soil pH	Use Rate (ounces/Acre)	Minimum Interval for Planting Grasses
7.9 or lower	1/10 (0.0038)	2 months (all grasses)

GRAZING
There are no grazing restrictions on Tide MSM 60 DF Herbicide.

Treated vegetation can be cut for forage or hay.

Injury to or loss of desirable trees or vegetation may result from failure to observe the following precautions and restrictions:

PRECAUTIONS

- Wheat and barley varieties may differ in their response to various herbicides. Consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of Tide MSM 60 DF Herbicide to a small area.
- Under certain conditions such as heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after Tide MSM 60 DF Herbicide applications, temporary discoloration and/or crop injury may occur. **DO NOT** apply Tide MSM 60 DF Herbicide to wheat or barley that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage or crop injury may result. Risk of injury is greatest when crop is in the 2 to 5 leaf stage. Severe winter stress, drought, disease, or insect damage following application also may result in crop injury.

- The combined treatment effects of Tide MSM 60 DF Herbicide postemergence preceded by preemergence wild oat Herbicides may cause crop injury to spring wheat when crop stress (soil crusting, planting too deep, prolonged cold weather, or drought) causes poor seedling vigor.
- In the Pacific Northwest, to prevent cold weather-related crop injury, avoid making applications during winter months when weather conditions are unpredictable and can be severe.
- **DO NOT** apply to wheat, barley or pastures undersown with legumes, as injury to the forage may result.
- To reduce the potential for movement of treated soil due to wind erosion, **DO NOT** apply to powdery dry or light sandy soils until they have been stabilized by rainfall, trashy mulch, reduced tillage, or other cultural practices. Injury to immediately adjacent crops may occur when treated soil is blown onto land used to produce crops other than cereal grains or pasture/rangeland.
- For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheat tract areas may be reduced. Add 2,4-D or MCPA to improve weed control under these conditions.
- Preplant or preemergence applications of 2,4-D made within 2 weeks of planting spring cereals may cause crop injury when used in conjunction with early postemergence applications of Tide MSM 60 DF Herbicide. For increased crop safety, delay Tide MSM 60 DF Herbicide treatment until crop tillering has begun.

RESTRICTIONS

- Coveralls, shoes plus socks must be worn if cutting within 4 hours of treatment.
- **DO NOT** apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- **DO NOT** use on grasses grown for seed.
- **DO NOT** apply to irrigated land where tailwater will be used to irrigate crops other than wheat and barley.
- **DO NOT** apply to frozen ground as surface runoff may occur.
- **DO NOT** apply to snow-covered ground.
- **DO NOT** plant grass and legume mixtures following previous use of Tide MSM 60 DF in wheat, barley, triticale or fallow as injury to the legume may occur.

NON-CROP AREAS, CONIFER PLANTATIONS, HARDWOOD PLANTATIONS, PASTURES, CONSERVATION RESERVE PROGRAM (CRP), AND UNCULTIVATED AGRICULTURAL AREAS DIRECTLY ADJACENT TO TREATED PASUTRES OR RANGELAND

Tide MSM 60 DF Herbicide is a dry-flowable granule that is mixed in water and applied as a spray. Tide MSM 60 DF Herbicide controls many annual and perennial weeds and woody plants in non-crop areas, conifer and hardwood plantations. Tide MSM 60 DF Herbicide can also be used on pastures, or CRP as well as selected uncultivated agricultural areas (fence rows, farmyards, and rights-of-way) directly adjacent to treated pastures or rangeland, where grazing or harvesting for animal feed may occur.

Tide MSM 60 DF Herbicide can be used for general weed and brush control and for the control of certain noxious weeds on noncrop sites, ditch banks or dry drainage ditches and for selective weed control in certain types of unimproved turf grass. Tide MSM 60 DF Herbicide can also be used for controlling and suppressing undesirable weeds and hardwoods in conifer plantations and weeds in hardwood plantations.

Tide MSM 60 DF Herbicide controls weeds and woody plants primarily by post emergent activity. Although Tide MSM 60 DF Herbicide has preemergence activity, best results are generally obtained when Tide MSM 60 DF Herbicide is applied to foliage after emergence or dormancy break. Generally, for the control of annual weeds, Tide MSM 60 DF Herbicide provides best results when applied to young, actively growing weeds. For the control of perennial weeds, applications made at the bud/bloom stage or while the target weeds are in the fall rosette stage may provide the best results. The use rate depends upon the weed species and size at the time of application.

The degree and duration of control may depend on the following:

- Weed spectrum and infestation intensity
- Weed size at application
- Environmental conditions of and following treatment
- Soil pH, soil moisture, and soil organic matter

Tide MSM 60 DF Herbicide can be applied on conifer and hardwood plantations and noncrop sites that contain areas of temporary surface water caused by the collection of water between planting beds, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittently flooded low-lying sites when no water is present. It is also permissible to treat marshes, swamps, and bogs after water has receded as well as seasonally dry food deltas.

Restrictions:

- **DO NOT** apply more than 4 ounces Tide MSM 60 DF Herbicide (0.15 lb ai) per acre per year.
- **DO NOT** make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.
- **DO NOT** use on irrigation ditches.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

Tide MSM 60 DF Herbicide is absorbed primarily through the foliage of plants, and by the roots to a lesser degree. Plant cell division is generally inhibited in sensitive plants within a few hours following uptake. Two to 4 weeks after application, leaf growth slows followed by discoloration and tissue death. The final effects on annual weeds are evident about 4 to 6 weeks after

application. The ultimate effect on perennial weeds on woody plants occurs in the growing season following application.

Warm, moist conditions following treatment promote the activity of Tide MSM 60 DF Herbicide while cold dry conditions may reduce or delay activity. Weeds and brush hardened off by cold weather or drought stress may not be controlled.

One to two inches of rainfall or sprinkler irrigation (enough to wet the top 2-3 inches of soil profile) may be needed to move Tide MSM 60 DF Herbicide into the weed root zone before the next flush of weeds emerge. The amount of moisture required for sufficient activation increases with crop or weed residue and for finer textured soils. Without sufficient rainfall or sprinkler irrigation to move Tide MSM 60 DF Herbicide into the weed root zone, weeds that germinate after treatment will not be controlled.

Application of Tide MSM 60 DF Herbicide provides the best control in vigorously growing grasses that shade competitive weeds. Weed control in areas of thin grass may not be as satisfactory. However, a grass canopy that is too dense at application can intercept a spray and reduce weed control.

Tide MSM 60 DF Herbicide is safe to grasses under normal conditions. However, grasses that are stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, or cultural practices may be injured by applications of Tide MSM 60 DF Herbicide. In addition, different species of grass may be sensitive to treatment with Tide MSM 60 DF Herbicide under otherwise normal conditions. Application of Tide MSM 60 DF Herbicide to these species may result in injury.

Use a surfactant to enhance the control of susceptible plants, except where noted. Apply at a minimum rate (concentration) of ¼% volume/volume (1 quart per 100 gallons of spray solution) or at the manufacturer's specified rate. Use only EPA approved surfactants containing at least 80% active ingredient. Certain types of surfactants', such as those incorporating acetic acid (i.e., LI-700), may not be compatible with Tide MSM 60 DF Herbicide and may result in decreased performance. Certain surfactants may not be suitable for use on desirable plants such as turf and conifers, listed on this label. Consult the surfactant manufacturer's label for appropriate uses.

Weed and brush control may be reduced if rainfall, snowfall or sprinkler irrigation occurs within 4 hours following application.

AGRICULTURAL USES

CONIFER PLANTATIONS
Application Information
Use Tide MSM 60 DF Herbicide for the control of many species of weeds and deciduous trees on sites where conifers are growing or are to be planted. Apply by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" and "Brush Species Controlled" for a listing of susceptible species.

Application Timing
Apply Tide MSM 60 DF Herbicide after weeds have emerged or after undesirable hardwoods have broken winter dormancy and have reached the point of full leaf expansion.

Conifer Site Preparation
Application Before Transplanting
After consulting the "Weeds Controlled" and "Brush Species Controlled" tables, apply the rates of Tide MSM 60 DF Herbicide specified for the most difficult to control species on the site.

Southeast – Apply up to 4 ounces (0.15 lb ai) per acre for loblolly and slash pines. Transplant the following planting season.

Northeast and Lake States – Apply up to 2 ounces (0.075 lb ai) per acre for red pine. Transplant the following planting season. Apply up to 2 ounces (0.075 lb ai) per acre for black, white and Norway spruce. Transplant the following spring.

West – Apply up to 2 ounces (0.075 lb ai) per acre prior to planting Douglas fir, Sitka Spruce, Western Red Cedar, Western Hemlock, Ponderosa Pine, and Grand Fir in the Coast Rangeland and western slope of the Cascades in Oregon and Washington. These conifer species listed can be planted anytime after application. Other conifer species can be planted providing the user has prior experience indicating acceptable tolerance to Tide MSM 60 DF Herbicide soil residues.

Without prior experience, plant other species on a small scale to determine selectivity before large-scale plantings are made as unacceptable injury may occur. Tide International USA, Inc. will not assume responsibility for injury to any conifer species not listed on this label.

TANK MIX COMBINATIONS

For broader spectrum control, use the following products in combination with Tide MSM 60 DF Herbicide.

Accord™ (Glyphosate-isopropylammonium, EPA Reg. No. 524-326)
Tank mix 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) with 10 to 24 fluid ounces of Accord™ (Glyphosate-isopropylammonium, EPA Reg. No. 524-326) per acre. Refer to the product container for a list of species controlled.

Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299)
Tank mix 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) with 10 to 24 fluid ounces of Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299) per acre. Loblolly and slash pines can be transplanted the planting season following the application. This combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, persimmon, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, and red maple.

Accord™ (Glyphosate-isopropylammonium, EPA Reg. No. 524-326) + Arsenal® Applicators Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299)
Tank mix ½ to 1 ounce of Tide MSM 60 DF Herbicide (0.0187 to 0.0375 lb ai) with 16 to 64 fluid ounces of Accord™ (Glyphosate-isopropylammonium, EPA Reg. No. 524-326) and 10 to 12 fluid ounces of Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299) per acre. Slash and loblolly pines can be transplanted the planting season following application. This combination controls cherry, dogwood, elms, oaks (red and water), persimmon, sassafras, sweetgum and suppresses hickory.

VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA REG. NO. 84229-32)
Tank mix 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) per acre with VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA Reg. No. 84229-32) at the rates specified on the container for various soil textures. Loblolly and slash pines can be transplanted the planting season following application. Refer to the product container for a list of species controlled.

OUST® EXTRA (Metsulfuron and Sulfometuron, EPA Reg. No. 432-1557)
Tank mix ½ to 1-½ ounces of Tide MSM 60 DF Herbicide (0.0187 to 0.0562 lb ai) with 2 to 3 ounces of OUST® EXTRA (Metsulfuron and Sulfometuron, EPA Reg. No. 432-1557) per acre for herbaceous weed control. Refer to the product container and the "Weeds Controlled" section of this label for a listing of the weeds controlled. Loblolly and slash pines can be transplanted the planting season following application. Tank mix 2 ounces of Tide MSM 60 DF Herbicide (0.075 lb ai) with 3 ounces of OUST® EXTRA (Metsulfuron and Sulfometuron, EPA Reg. No. 432-1557) per acre for herbaceous weed control and early spring suppression of bull thistle and Canada thistle in the Coast Rangeland and western slope of the Cascade Mountains. Douglas Fir can be transplanted at least 90 days following application.

RELEASE—HARDWOOD CONTROL AND SUPPRESSION
Use Tide MSM 60 DF Herbicide for application over the top of established slash and loblolly pine to control the species listed in "Weeds Controlled" and "Brush Species Controlled" section of this label. Apply 1 to 4 ounces (0.0375 to 0.15 lb ai) per acre to control the species indicated, including kudzu.

Tank Mix Combinations
For broader spectrum control, use the following products in combination with Tide MSM 60 DF Herbicide.

Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299)
Tank mix 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) with 8 to 16 fluid ounces of Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299) per acre for application to loblolly pine. Refer to the Arsenal® Applicator's Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299) label regarding the use of surfactants and the appropriate application timing with respect to the age and development stage of the pines. This combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, oaks (red, white and water), sassafras, sweetgum, Vaccinium species and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, persimmon, and red maple.

VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA REG. NO. 84229-32)
Tank mix 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) with VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA Reg. No. 84229-32) at the rates specified on the container for various soil textures. This combination can be applied to loblolly and slash pines.

RELEASE—HERBACEOUS WEED CONTROL
Tide MSM 60 DF Herbicide can be applied to transplanted loblolly and slash pine for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and specific application rates. Best results are obtained when Tide MSM 60 DF Herbicide is applied just before weed emergence until shortly after weed emergence.

Tank Mix Combinations
For broader spectrum control, use the following products in combination with Tide MSM 60 DF Herbicide.

Arsenal® Applicators Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299)
Tank mix ½ to 1 ounce of Tide MSM 60 DF Herbicide (0.0187 to 0.0375 lb ai) with 4 fluid ounces of Arsenal® Applicators Concentrate (Imazapyr, isopropylamine salt, EPA Reg. No. 241-299) per acre. The tank mix can be used on loblolly pine.

OUST® XP (Metsulfuron and Sulfometuron, EPA Reg. No. 432-1557)
Tank mix ½ to 1 ½ ounces of Tide MSM 60 DF Herbicide (0.0187 to 0.0562 lb ai) with 2 to 3 ounces of OUST® XP (Metsulfuron and Sulfometuron, EPA Reg. No. 432-1557) per acre. Best results are obtained when Tide MSM 60 DF Herbicide is applied just before weed emergence until shortly after weed emergence. This tank mix can be used on loblolly and slash pine.

VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA REG. NO. 84229-32)
Tank mix ½ to 1 ounce of Tide MSM 60 DF Herbicide (0.0187 to 0.0375 lb ai) with VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), VELPAR® DF (Hexazinone, EPA Reg. No. 61842-48), TIDE HEXAZINONE 2SL (Hexazinone, EPA REG. NO. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA REG. NO. 84229-32) at the rates specified on the container for various soil textures. This combination can be applied to loblolly and slash pines.

IMPORTANT PRECAUTIONS--CONIFER PLANTATIONS ONLY

- Applications of Tide MSM 60 DF Herbicide made to conifers that are suffering from loss of vigor caused by insects, disease, drought, winter damage, animal damage, excessive soil moisture, planting shock or other stresses may injure or kill the trees.
- Only make applications of Tide MSM 60 DF Herbicide made for herbaceous release after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Tide MSM 60 DF Herbicide applications may result in damage and mortality to other species of conifers when they are present on sites with those listed in the preceding directions for conifer plantations

RESTRICTIONS – CONIFER PLANTATIONS ONLY

- **DO NOT** apply Tide MSM 60 DF Herbicide to conifers grown as ornamentals
- **DO NOT** apply more than 4 ounces Tide MSM 60 DF Herbicide (0.15 lb ai) per acre per year.
- **DO NOT** apply more than 4 ounces Tide MSM 60 DF Herbicide (0.15 lb ai) per acre per application.
- **DO NOT** exceed 1 application per year.

HARDWOOD PLANTATIONS
Application Information
Use Tide MSM 60 DF Herbicide at rates of up to 2 ounces (0.075 lb ai) per acre for the control of many weed species on sites where yellow poplar is growing or is to be planted, and on sites where red alder is to be planted. Apply by ground equipment or by air (helicopter only). Refer to the “Weeds Controlled” section of this label for a listing of susceptible species.

Application Timing
Tide MSM 60 DF Herbicide can be applied as a site preparation treatment prior to planting red alder or yellow poplar. As a prior to planting site preparation treatment for red alder, Tide MSM 60 DF Herbicide can be tank mixed with other Herbicides labeled for this use.

Tide MSM 60 DF Herbicide can also be applied over-the-top of planted yellow poplar seedlings after the soil has settled around the root system, but before the seedlings have broken dormancy (prior to bud break).

Release—Herbaceous Weed Control
Tide MSM 60 DF Herbicide can be applied to yellow poplar for the control of herbaceous competition. Consult the “Weeds Controlled” for a listing of the susceptible species and specific

application rates. Best results are obtained when Tide MSM 60 DF Herbicide is applied just before weed emergence until shortly after weed emergence.

Tank Mix Combinations
Tank mix ½ ounce of Tide MSM 60 DF Herbicide (0.0187 lb ai) with 4 to 6 pints of VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), TIDE HEXAZINONE 2SL (Hexazinone, EPA Reg. No. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA Reg. No. 84229-32) as specified on the package label for "RELEASE – HERBACEOUS WEED CONTROL" in pine plantations in the eastern U.S. Follow the VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), TIDE HEXAZINONE 2SL (Hexazinone, EPA Reg. No. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA Reg. No. 84229-32) label directions regarding altering the application rate by soil texture.

IMPORTANT PRECAUTIONS--HARDWOOD PLANTATIONS ONLY

- Application of VELPAR® L (Hexazinone, EPA Reg. No. 61842-47), TIDE HEXAZINONE 2SL (Hexazinone, EPA Reg. No. 84229-35) or TIDE HEXAZINONE 75 WDG (Hexazinone, EPA Reg. No. 84229-32) and Tide MSM 60 DF Herbicide made to yellow poplar that are suffering from loss of vigor caused by insects, disease, drought, winter damage, animal damage, excessive soil moisture, planting shock or other stresses may injure or kill the seedlings.
- Only make applications of Tide MSM 60 DF Herbicide made for release after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Careful consideration must be given by an experienced and knowledgeable forester to match the requirements of yellow poplar and/or red alder to conditions of the site. Treatment of yellow poplar and/or red alder planted on a site inadequate to meet its requirements may injure or kill the seedlings.

RESTRICTIONS – HARDWOOD PLANTATIONS ONLY

- **DO NOT** use a surfactant for applications made over the tops of trees
- **DO NOT** apply more than 2 ounces Tide MSM 60 DF Herbicide (0.075 lb ai) per acre per year.
- **DO NOT** apply more than 2 ounces Tide MSM 60 DF Herbicide (0.075 lb ai) per acre per application.
- **DO NOT** exceed 1 application per year.

PASTURE, RANGELAND AND CONSERVATION RESERVE PROGRAM (CRP)

APPLICATION INFORMATION FOR GRASS ESTABLISHMENT IN PASTURE, RANGELAND AND CONSERVATION RESERVE PROGRAM (CRP)

Use Tide MSM 60 DF Herbicide for the suppression or control of broadleaf weeds to aid in the establishment of the following perennial native or improved grasses planted in pasture, rangeland or acres enrolled in the Conservation Reserve Program (CRP):

Blue grama
Bluestems – big, little, plains, sand, WW spar
Buffalo grass
Green sprangletop
Indian grass
Klein grass
Love grasses – atherstone, sand, weeping, wilman
Orchard grass
Sideoats grama
Switch grass – Blackwell
Wheat grasses – bluebunch, crested, intermediate, pubescent, Siberian, Slender, Streambank, Tall, thickspike, western
Wild rye grass – Russian

Consult with the Natural Resources and conservation Service or other local experts concerning planting techniques and other cultural practices to maximize potential for grass establishment.

Due to the inability of newly planted grass stands to sufficiently compete with weeds, and the severity of weed pressure in new grass stands, performance from Tide MSM 60 DF Herbicide may not always be satisfactory. An additional Herbicide application or mowing may be needed.

Use Rates and Application Timing for Grass Establishment in Pasture, Rangeland and CRP

Preplant (prior to planting) or Preemergence (after planting but before grass emergence)
Apply Tide MSM 60 DF Herbicide preplant or preemergence at 1/10 ounce/acre (0.0038 lb ai/acre) on all labeled grasses except orchard grass and Russian wild rye grass. **DO NOT** apply Tide MSM 60 DF Herbicide preplant or preemergence to orchard grass and Russian wild rye grass as severe crop injury may result.

Early Postemergence to New Plantings
Apply Tide MSM 60 DF Herbicide at 1/10 ounce/acre (0.0038 lb ai/acre), plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution on all labeled grasses anytime after grass emergence. **DO NOT** use a spray adjuvant other than non-ionic surfactant.

Because grass species differ in time of emergence, apply only after majority of grasses are in the 3 to 4 leaf stage.

Postemergence to stands with 1-5 leaf grasses planted the previous season
Apply Tide MSM 60 DF Herbicide at 1/10 ounce/acre (0.0038 lb ai/acre) plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution, on all labeled grasses when the majority of the grasses have one or more leaves. **DO NOT** use a spray adjuvant other than non-ionic surfactant.

RESTRICTIONS:

- **DO NOT** apply more than 1/10 ounces Tide MSM 60 DF Herbicide (0.0038 lb ai) per acre per year.
- **DO NOT** apply more than 1/10 ounces Tide MSM 60 DF Herbicide (0.0038 lb ai) per acre per application.
- **DO NOT** exceed 1 application per year.

APPLICATION INFORMATION FOR ESTABLISHED GRASSES IN PASTURE, RANGELAND AND CONSERVATION RESERVE PROGRAM (CRP)

Use Rates for Established Pastures, Rangeland and CRP

Apply 1/10 to 1 ounce (0.0038 to 0.0375 lb ai) of Tide MSM 60 DF Herbicide per acre as a broadcast application to established grasses in pasture, rangeland and CRP. For spot application, use 1 ounce (0.0375 lb ai) per 100 gallons of water. **DO NOT** apply more than 1 2/3 ounces (0.05 lb ai) of Tide MSM 60 DF Herbicide per acre per year.

Application Timing – Established Pastures, Rangeland and CRP

Tide MSM 60 DF Herbicide can be applied to established native grasses such as bluestems and grama, and on other established pasture grasses such as bermudagrass, bluegrass, orchardgrass, bromegrass, fescue and timothy that were planted the previous growing season (or earlier) and are fully tillered, unless otherwise directed on this label. Specific application timing information on several of these grass species follows:

Pasture Grass	Maximum Product oz./A per single application	Maximum oz./A of product per year	Maximum Number of Applications per Year	Minimum time from grass establishment to Tide MSM 60 DF Herbicide application
Bermudagrass	**Broadcast Application:** 1 (0.0375 lb ai) **Spot Application:** 1 oz (0.0375 lb ai) per 100 gallons of water **DO NOT** exceed 3/4 oz (0.0281 lb ai) per acre	**Broadcast Application:** 1 (0.0375 lb ai) **Spot Application:** 1 oz (0.0375 lb ai) per 100 gallons of water **DO NOT** exceed 1 2/3 oz (0.05 lb ai) per acre	1	2 months
Bluegrass, bromegrass, and orchardgrass	**Broadcast Application:** 1 (0.0375 lb ai) **Spot Application:** 1 oz (0.0375 lb ai) per 100 gallons of water **DO NOT** exceed 3/4 oz (0.0281 lb ai) per acre	**Broadcast Application:** 1 (0.0375 lb ai) **Spot Application:** 1 oz (0.0375 lb ai) per 100 gallons of water **DO NOT** exceed 1 2/3 oz (0.05 lb ai) per acre	1	6 months
Timothy	4/10 (0.015 lb ai)	4/10 (0.015 lb ai)	1	12 months

Fescue	4/10 (0.015 lb ai)	4/10 (0.015 lb ai)	1	24 months

Fescue Precautions and Restrictions:

Note that Tide MSM 60 DF Herbicide may temporarily stunt fescue, cause yellowing or seedhead suppression. To minimize these symptoms, observe the following precautions and restrictions:

Precautions:

- Tank mix Tide MSM 60 DF Herbicide with 2,4-D
- Use the lowest specified rate for target weeds
- Use a non-ionic surfactant at ½ to 1 pint per 100 gallons of spray solution (1/16 to 1/8% v/v/)
- Make application later in the spring after the new growth is 5 to 6 inches tall, or in the fall.
- The first cutting yields may be reduced due to seedhead suppression resulting from treatment with Tide MSM 60 DF Herbicide.

Restrictions:

- **DO NOT** use more than 4/10 oz./A (0.015 lb ai/A) of Tide MSM 60 DF Herbicide per acre per year
- **DO NOT** use more than 4/10 oz./A (0.015 lb ai/A) of Tide MSM 60 DF Herbicide per acre per application
- **DO NOT** exceed 1 application per year.
- **DO NOT** use surfactant when liquid nitrogen is used as a carrier
- **DO NOT** use a spray adjuvant other than non-ionic surfactant

Timothy Precautions and Restrictions:

Apply when Timothy is at least 6" tall and actively growing. Applications of Tide MSM 60 DF Herbicide to timothy under any other conditions may cause crop yellowing and/or stunting. To minimize these symptoms, observe the following precautions and restrictions:

Precautions:

- Tank mix Tide MSM 60 DF Herbicide with 2,4-D
- Use the lowest specified rate for target weeds
- Use a non-ionic surfactant at ½ pint per 100 gallons
- Make application in the late summer or fall

Restrictions:

- **DO NOT** use more than 4/10 oz./A (0.015 lb ai/A) of Tide MSM 60 DF Herbicide per year
- **DO NOT** use more than 4/10 oz./A (0.015 lb ai/A) of Tide MSM 60 DF Herbicide per application
- **DO NOT** exceed 1 application per year.
- **DO NOT** use surfactant when liquid nitrogen is used as a carrier
- **DO NOT** use a spray adjuvant other than non-ionic surfactant

Application of Tide MSM 60 DF Herbicide to Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail may cause severe injury to and /or loss of pastures.

Other Pasture and Rangeland Grasses: Varieties and species of forage grasses differ in their tolerance to herbicides. When using Tide MSM 60 DF Herbicide on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage can be treated the following season. Broadleaf pasture species such as alfalfa and clover are highly sensitive to Tide MSM 60 DF Herbicide and will be severely stunted or injured by Tide MSM 60 DF Herbicide.

WEEDS AND BRUSH CONTROLLED OR SUPPRESSED IN PASTURES, RANGELAND AND CONSERVATION RESERVE PROGRAM (CRP)

Unless otherwise directed, treat when weeds are less than 4" tall or in diameter and are actively growing.

Before using Tide MSM 60 DF Herbicide, carefully consider your crop rotation plans and options. For rotational flexibility, **DO NOT** treat all of your pasture, rangeland or CRP acres at the same time.

1/10 OUNCE (0.0038 LB AI) PER ACRE

Bitter sneezeweed
Blue/purple mustard*
Broomweed, common
Bur buttercup (testiculate)
Buttercup
Canada thistle*‡
Carolina geranium
Coast fiddleneck (tarweed)
Common chickweed
Common mullein
Common Purslane
Conical catchfly
Corn gromwell*‡
Cowcockle
Curly dock
Cutleaf evening primrose*‡
Dandelion
False chamomile
Field pennycress (fanweed)
Filaree
Flixweed*
Groundsel (common)
Henbit
Kochia*
Lambsquarters (common, slimleaf)
Marestail
Mayweed chamomile
Miners lettuce
Pigweed (redroot, smooth, tumble)
Plains coreopsis
Plantain
Prickly lettuce*
Prostrate knotweed*‡
Russian thistle*
Shepherd's purse
Smallseed falseflax
Smartweed (green, ladysthumb, pale)
Snow speedwell
Tansymustard*
Treacle mustard (Bushy Wallflower)
Tumble/Jim Hill mustard
Volunteer sunflower*
Waterpod
Wild buckwheat*‡
Wild garlic*
Wild mustard
Wild sunflower*‡
Woolly croton*

2/10 OUNCE (0.0075 LB AI) PER ACRE

Annual marshelder
Blackeyed-Susan
Buckbrush‡
Burclover
Common yarrow
Dogfennel
Horsemint (beebalm)
Musk thistle*
Purple scabious
Scotch thistle*
Western snowberry‡
Wild carrot

3/10 to ½ OUNCE (0.0112 to 0.0187 LB AI) PER ACRE

Annual sowthistle
Aster
Bittercress
Chicory
Clover
Cocklebur
Corn cockle
Crown vetch
Pensacola bahiagrass*
Redstem filaree
Rough fleabane
Seaside arrowgrass
Sericea lespedeza*
Silky crazywood (locoweed)
Sweet clover
Wild lettuce

Goldenrod
Maximillion sunflower
Multiflora rose*‡
Pennsylvania smartweed
Wood sorrel
Yankeeweed

½ to 1 OUNCE (0.0187 to 0.0375 LB AI) PER ACRE

Black henbane
Blackberry
Broom snakeweed
Buckhorn plantain
Common crupina
Dewberry
Dyer's woad
Gorse
Halogeton
Honeysuckle
Multiflora rose and other wild roses*
Plumeless thistle
Rosering gaillardia
Spotted knapweed*
Teasel
Wild caraway
Yucca*‡

1 OUNCE (0.0375 LB AI) PER ACRE

Bull thistle
Common tansy
Field bindweed‡
Gumweed
Houndstongue
Perennial Pepperweed
Poison hemlock
Purple loosestrife
Rush skeletonweed*‡
Salsify
Scouringrush
Snowberry
St. Johnswort
Western salsify
Whitetop (hoary cress)

*See the Specific Weed Problems section of this label.
‡Weed suppression is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

SPOT APPLICATIONS FOR THE SUPPRESSION‡ OF WEEDS AND BRUSH

APPLICATION INFORMATION FOR SPOT APPLICATIONS

Use Tide MSM 60 DF Herbicide for the suppression of the following undesirable weed and brush species growing in pastures, rangeland or CRP using spot applications. Make spot applications by using equipment such as back pack sprayers or hand sprayers. Apply Tide MSM 60 DF Herbicide as a spray to the foliage and stems. The application volume required will vary with the height and density of the brush and the application equipment used. Regardless of the application volume and equipment used, thorough coverage of the foliage and stems is necessary to optimize results. On tall, dense stands, it is often necessary to spray from both sides to obtain adequate coverage. Add a non-ionic surfactant having at least 80% active ingredient at 2-4 pints per 100 gallons of spray solution.

Use Rates for Spot Application

Mix 1 ounce of Tide MSM 60 DF Herbicide (0.0375 lb ai) per 100 gallons of water.

Application Timing for Spot Applications

Make a foliar application of the specified rate of Tide MSM 60 DF Herbicide during the period from full leaf expansion in the spring until the development of full fall coloration.

Weed and Brush Species Suppressed with Spot Applications

Blackberry‡
Canada Thistle*‡
Dewberry‡
Multiflora Rose‡

*See the Specific Weed Problems section.

‡Weed and brush suppression is a reduction in weed and brush competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

Restrictions:

- **DO NOT** use more than 1 2/3 oz (0.05 lb ai) of Tide MSM 60 DF Herbicide per acre per year
- **DO NOT** use more than 1 2/3 oz (0.05 lb ai) of Tide MSM 60 DF Herbicide per acre per application
- **DO NOT** exceed 1 application per year

SPECIFIC WEED PROBLEMS

Note: Thorough spray coverage of all weed species listed below is very important.

Blue/Purple Mustard, Flixweed, and Tansymustard: For best results, apply Tide MSM 60 DF Herbicide tank mixtures with 2,4-D or MCPA postemergence to mustards, but before bloom.

Broom Snakeweed: For best results, apply Tide MSM 60 DF Herbicide at ½ ounce/acre (0.01875 lb ai/acre) in the fall. Applications of Tide MSM 60 DF Herbicide in the spring will provide suppression only.

Canada Thistle: For suppression with broadcast applications, apply either Tide MSM 60 DF Herbicide or Tide MSM 60 DF Herbicide plus 2,4-D or MCPA in the spring after the majority of thistles have emerged and are small (rosette stage to 6" elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with grass.

For suppression with spot applications, apply as a foliar spray once plant is fully leaved.

Corn Gromwell, Cutleaf Evening Primrose and Prostrate Knotweed: Apply Tide MSM 60 DF Herbicide when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D or MCPA with Tide MSM 60 DF Herbicide can improve results.

Kochia, Russian thistle, Prickly lettuce: Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use Tide MSM 60 DF Herbicide in a tank mix with Dicamba (such as Banvel or Clarity) and 2,4-D. Apply Tide MSM 60 DF Herbicide in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing.

Multiflora Rose: For control with broadcast applications, apply Tide MSM 60 DF Herbicide at ½ ounce (0.01875 lb ai) per acre as a broadcast application. For control with foliar applied spot applications, apply Tide MSM 60 DF Herbicide at 1 ounce (0.0375 lb ai) per 100 gallons of water.

For suppression with broadcast applications, apply Tide MSM 60 DF Herbicide at rates of 3/10 up to ½ ounce (0.0112 to 0.0187 lb ai) per acre. Apply in the spring, soon after multiflora rose is fully leafed and is less than 3 feet tall.

For control with Spotgun Basal Soil Treatment, prepare a spray suspension of Tide MSM 60 DF Herbicide by mixing 1 ounce (0.0375 lb ai) per gallon water. Mix vigorously until the Tide MSM 60 DF Herbicide is dispersed and agitate periodically while applying the spray suspension. Apply the spray preparation with an exact delivery handgun applicator. Apply at the rate of 4 ml for each 2 feet of rose canopy diameter. Direct the treatment to the soil within 2 feet of the stem union. When treating large plants and more than one delivery is required, make applications on opposite sides of the plant.

Make applications from early spring to summer.

Musk Thistle, Scotch Thistle: Apply Tide MSM 60 DF Herbicide at 2/10 to ¾ ounce (0.0075 to 0.0281 lb ai) per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Certain biotypes of Musk and Scotch Thistles are less sensitive to Tide MSM 60 DF Herbicide and may not be controlled with Tide MSM 60 DF Herbicide rates less than ¾ ounce (0.0281 lb ai) per acre. Consult with your local

Tide International USA, Inc. representative, dealer or applicator for specific use rate and tank mix directions for your area. Make fall applications before the soil freezes.

Pensacola bahiagrass control in established Bermudagrass pasture: Apply Tide MSM 60 DF Herbicide at 3/10 ounce (0.0112 lb ai) per acre after green-up in the spring but before bahiagrass seedhead formation. Apply when moisture is sufficient to enhance grass growth.

Tide MSM 60 DF Herbicide is very effective for removal of bahiagrass from bermudagrass pastures. In highly infested pastures, the use of Tide MSM 60 DF Herbicide can clear the areas of useful forage until the bermudagrass has time to cover the area. Therefore, spread out Tide MSM 60 DF Herbicide treatments over a period of years. **DO NOT** apply to an entire farm or ranch in one year. Fertilization (particularly with nitrogen and potassium) and/or replanting may accelerate the process of reestablishment of bermudagrass.

Under heavy bahiagrass pressure, grazing pressure, or adverse weather conditions (heat and drought), bahiagrass regrowth may occur.

Restrictions:

- **DO NOT** use Tide MSM 60 DF Herbicide for control of common or Argentine bahiagrass.
- **DO NOT** use Tide MSM 60 DF Herbicide in liquid fertilizer solutions for Pensacola bahiagrass control as poor control and/or regrowth may occur.

Rush skeletonweed: For best results, apply Tide MSM 60 DF Herbicide at 1 ounce (0.0375) per acre with 8 fluid ounces of dicamba (such as Banvel or Clarity) and 16 fluid ounces of 2,4-D.

Sericea lespedeza: For best results, apply Tide MSM 60 DF Herbicide at 4/10 to ½ ounce (0.015 to 0.0187 lb ai) per acre beginning at flower bud initiation through the full bloom stage of growth. Consult with your local Tide International USA, Inc. representative, dealer or applicator for specific use rate directions for your area. **DO NOT** make applications if drought conditions exist at intended time of application.

Spotted Knapweed: For best results, apply Tide MSM 60 DF Herbicide at ½ ounce (0.0187 lb ai) per acre with 8 fluid ounces of dicamba (such as Banvel or Clarity) and 16 ounces active ingredient per acre of 2,4-D.

Sunflower (wild or volunteer): Apply either Tide MSM 60 DF Herbicide or Tide MSM 60 DF Herbicide plus 2,4-D or MCPA after the majority of sunflowers have emerged, are 2” to 4” tall and are actively growing. Use spray volumes of at least 3 gallons by air or 10 gallons by ground.

Wild Buckwheat: For best results, apply Tide MSM 60 DF Herbicide plus 2,4-D or MCPA when plants have no more than 3 true leaves (not counting cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

Wild Garlic: Apply 1/10 to 2/10 ounce (0.0038-0.0075 lb ai) per acre of Tide MSM 60 DF Herbicide in the early spring when wild garlic is less than 12” tall with 2” to 4” of new growth.

Woolly Croton: Apply 1/10 to 2/10 (0.0038-0.0075 lb ai) ounce per acre of Tide MSM 60 DF Herbicide in the late spring or early summer from cotyledon through 2 true leaf stage.

Yucca: For best results, apply Tide MSM 60 DF Herbicide at ½ to ¾ ounce (0.0187 to 0.0281 lb ai) per acre plus 2,4-D, dicamba, dicamba plus 2,4-D, or Triclopyr BEE (such as Remedy®) from two weeks before blooming to two weeks after blooming.

SPRAY ADJUVANTS

Unless otherwise directed on this label, Tide MSM 60 DF Herbicide applications must include either a crop oil concentrate or a nonionic surfactant. In addition, an ammonium nitrogen fertilizer can be used unless specifically prohibited by tank mix partner labeling. Consult your local Tide International USA, Inc. representative prior to using other adjuvant systems. If another herbicide is tank mixed with Tide MSM 60 DF Herbicide, select adjuvants authorized for use with both products. Products must contain only EPA exempt ingredients (40 CFR 1001).

Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants can be used at 0.5% v/v (0.5 gallons per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

Nonionic Surfactants (NIS)

- Apply at 0.25% v/v (1 quart per 100 gallons spray solution) or 0.5% under arid conditions.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLD) greater than 12.

Ammonium Nitrogen Fertilizer

- Use 2 quarts/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 pounds/acre of a spray grade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 pounds/acre AMS under arid conditions.

Special Adjuvant Types

- Combination adjuvant products can be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types can be used if they provide the same functionality and have been evaluated and approved by Tide International USA, Inc. Consult your local Tide International USA, Inc. representative before using adjuvant types not specified on this label.

Exceptions: (1) On Fescue pastures use ½ to 1-pint non-ionic surfactant per 100 gallons; (2) on Timothy pastures use ½ pint non-ionic surfactant per 100 gallons.

Antifoaming agents can be used if needed.

DO NOT use low rates of liquid fertilizer as a substitute for surfactant.

GROUND APPLICATION

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flood nozzles on 30” spacings, use at least 10 gallons per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and a pressure of at least 30 pounds per square inch (psi). For 40” nozzle spacings, use at least 13 GPA; for 60” spacings, use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With “Raindrop RA” nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

For flat-fan nozzles, use at least 10 GPA for broadcast applications to pasture, rangeland or CRP.

Use 50-mesh screens or larger.

AERIAL APPLICATION

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage. Use a minimum of 2 GPA. In Idaho, Oregon and Washington, use a minimum of 3 GPA.

When applying Tide MSM 60 DF Herbicide by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields. See the Spray Drift Management section of this label.

TANK MIXTURES

With Insecticides and Fungicides

Tide MSM 60 DF Herbicide can be tank-mixed or used sequentially with insecticides and fungicides registered for use on pastures, rangeland or CRP. However, under certain conditions (drought stress or cold weather), tank mixes or sequential applications of Tide MSM 60 DF Herbicide with organophosphate insecticides (such as parathion) may produce temporary grass yellowing or, in severe cases, grass injury.

The potential for grass injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application.

Test these tank mixtures in a small area before treating large areas.

With Herbicides

Tide MSM 60 DF Herbicide can be tank mixed with other suitable registered herbicides to control weeds listed under Weeds Suppressed, weeds resistant to Tide MSM 60 DF Herbicide, or weeds not listed under Weeds Controlled. Read and follow all manufacturer's label directions for the companion herbicide. If those directions conflict with this label, **DO NOT** tank mix the herbicide with Tide MSM 60 DF Herbicide.

Herbicide Tank Mixtures for Pastures or Rangeland

For postemergence control of the following weeds in pastures or rangeland:

Annual marshelder	Common milkweed
Burclover	Common ragweed
Carolina horsenettle	Giant ragweed
Common cocklebur	Western ragweed

Apply Tide MSM 60 DF Herbicide at 1/10 to 1 ounce (0.0038 to 0.0375 lb ai) per acre in a tank mix with one of the following products. Refer to companion herbicide labels to confirm that the product is labeled for control of the weeds listed above and is registered for use in your state.

Product	**Rate (ounce product/A)**
Grazon P+D (2,4-D, triisopropanolamine salt and Picloram, triisopropanolamine salt, EPA Reg. No. 62719-182)	8 to 32
Picloram (such as Tordon® 22K (EPA Reg. No. 62719-6))	4 to 16
Weedmaster (Dicamba and 2,4-D, dimethylamine salt, EPA Reg. No. 71368-34)	8 to 32
Triclopyr BEE (such as Remedy® (EPA Reg. No. 62719-70))	8
Triasulfuron	0.35*
*For suppression of Western Ragweed in Phenoxy Restricted and Herbicide Regulated counties.	

Product	**Rate (ounces a.i./A)**
2,4-D	8 to 16
Dicamba (such as Banvel (EPA Reg. No. 70506-461) or Clarity (EPA Reg. No. 7969-137))	2 to 16
2,4-D + Dicamba	1 + 2.87 to 4 + 11.48

Herbicide Tank Mixtures for CRP

Preplant

Tide MSM 60 DF Herbicide can be tank mixed with glyphosate as a pre-plant (prior to the planting of CRP grasses) treatment to control broadleaf and grassy weeds. When using a glyphosate tank mix, allow at least 7 days after application before planting grasses. Refer to glyphosate containing product fact sheets and labels for all use instructions, label rates, weed control claims, and precautions.

Postemergence

For best weed control performance in CRP, use Tide MSM 60 DF Herbicide in a tank mix with 2,4-D (ester formulations perform best) or dicamba (such as Banvel or Clarity).

Tide MSM 60 DF Herbicide can be tank mixed with 2,4-D at ¼ pound a.i./A for all labeled grasses larger than the 5-leaf stage. For fully tillered stands, use up to ½ pound a.i./A of 2,4-D. A spray adjuvant can be added. However, the addition of spray adjuvant may increase the chance of grass injury.

Tide MSM 60 DF Herbicide can also be tank mixed with dicamba (such as Banvel (EPA Reg. No. 70506-461) or Clarity (EPA Reg. No. 7969-137)). Use not more than 1/8 to ¼ pound a.i./A of dicamba plus Tide MSM 60 DF Herbicide after majority of grasses are in the 3-leaf stage. In established grasses (2nd year stands), use not more than ¼ to ½ pound a.i./A dicamba plus Tide MSM 60 DF Herbicide. A spray adjuvant can be added. However, the addition of spray adjuvant may increase the chance of grass injury.

With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions can be used as a carrier in place of water. Run a tank mix compatibility test before mixing Tide MSM 60 DF Herbicide in fertilizer solution.

Tide MSM 60 DF Herbicide must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the Tide MSM 60 DF Herbicide is added. Use of this mixture may result in temporary grass yellowing and stunting.

If using low rates of liquid nitrogen fertilizer (between 5% and 50% of the spray solution volume) in the spray solution, the addition of a non-ionic surfactant is necessary. Add surfactant at ¼ pint per 100 gallons of spray solution (0.03% v/v/).

When using high rates of liquid nitrogen fertilizer (greater than or equal to 50% of the spray solution volume) in the spray solution, adding spray adjuvant(s) increases the risk of grass injury. Consult your agricultural dealer, consultant, fieldman, or Tide International USA, Inc. representative for specific directions before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with Tide MSM 60 DF Herbicide and liquid nitrogen fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). **DO NOT** add spray adjuvants when using Tide MSM 60 DF Herbicide in tank mix with 2,4-D ester and liquid nitrogen fertilizer solutions greater than 5% of the spray volume.

The use of liquid nitrogen fertilizer solutions greater than 5% of the spray volume with Tide MSM 60 DF Herbicide rates greater than 0.5 ounce/acre (0.0187 lb ai/acre) may cause grass injury.

Restrictions:

- **DO NOT** use low rates of liquid fertilizer as a substitute for spray adjuvants.
- **DO NOT** use with liquid fertilizer solutions with a pH less than 3.0.
- **DO NOT** use Tide MSM 60 DF Herbicide plus Malathion, as grass injury will result.
- **DO NOT** use a spray adjuvant other than non-ionic surfactant.

CROP ROTATION

Before using Tide MSM 60 DF Herbicide, carefully consider your crop rotation plans and options. For rotational flexibility, **DO NOT** treat all of your pasture, rangeland or CRP acres at the same time.

Minimum Rotational Intervals

Minimum rotation intervals* are determined by the rate of breakdown of Tide MSM 60 DF Herbicide applied. Tide MSM 60 DF Herbicide in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Tide MSM 60 DF Herbicide breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Tide MSM 60 DF Herbicide breakdown.

Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, monitor soil temperatures and soil moisture regularly when considering crop rotations.

*The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

Soil pH Limitations

DO NOT apply Tide MSM 60 DF Herbicide on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, Tide MSM 60 DF Herbicide could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Tide MSM 60 DF Herbicide.

Checking Soil pH

Before using Tide MSM 60 DF Herbicide, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0” to 4” samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on specific soil sampling procedures.

Bioassay

A field bioassay must be completed before rotating to any crop or grass species/variety not listed in the Rotation Intervals Table, or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table.

To conduct a field bioassay, grow test strips of the crop(s) or grass(es) you plant to grow the following year in fields previously treated with Tide MSM 60 DF Herbicide. Crop or grass response to the bioassay will indicate whether or not to rotate to the crop(s) or grass(es) grown in the test strips.

If a field bioassay is planned, check with your local Agricultural dealer or Tide International USA, Inc. representative for information detailing the field bioassay procedure.

Grazing/Haying

There are no grazing or haying restrictions for Tide MSM 60 DF Herbicide. Coveralls, shoes plus socks must be worn if cutting within 4 hours of treatment.

Rotation Intervals in Pasture, Rangeland or CRP for Overseeding and Renovation

Location	Crop or Grass Species	Maximum Tide MSM 60 DF Herbicide Rate on Pasture ounce/acre (lb ai/acre)	Minimum Rotation Interval (months)
AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV	Alfalfa, red clover, white clover, sweet clover, bermudagrass, bluegrass, ryegrass, tall fescue	1/10 to 3/10 (0.0038 to 0.0112)	4
	Wheat (except durum)	1/10 to 3/10 (0.0038 to 0.0112)	1
	Durum, barley, oat	1/10 to 3/10 (0.0038 to 0.0112)	10
All states not included above	Red clover, white clover and sweet clover	1/10 to 2/10 (0.0038 to 0.0075)	12
	Bermudagrass, bluegrass, ryegrass	1/10 to 2/10 (0.0038 to 0.0075)	6
	Tall Fescue	1/10 to 2/10 (0.0038 to 0.0075)	18
	Wheat (except durum)	1/10 to 2/10 (0.0038 to 0.0075)	1
All areas with soil pH of 7.5 or less	Russian wildrye	1/10 to ½ (0.0038 to 0.0187)	1
	Green needlegrass, switchgrass, sheep fescue	1/10 to 1 (0.0038 to 0.0375)	1
	Meadow brome, smooth brome, alta fescue, red fescue, meadow foxtail, orchardgrass, Russian wildrye, timothy	1/10 to 1 (0.0038 to 0.0375)	2
All areas with soil pH of 7.9 or less	Alkali sacoton, mountain brome, blue grama, thickspike wheatgrass	1/10 to 1 (0.0038 to 0.0375)	1
	Sideoats grama, switchgrass	1/10 to ½ (0.0038 to 0.0187)	2
	Western wheatgrass	1/10 to 1 (0.0038 to 0.0375)	2
	Sideoats grama, switchgrass, big bluestem	1/10 to 1 (0.0038 to 0.0375)	3
AL, AR, FL, GA, KS, KY, LA, MS, MO, NC, OK, SC, TN, TX, VA, WV, with soil pH of 7.0 or less	STS soybeans	1/10 to 2/10 (0.0038 to 0.0075)	6
	Field corn	1/10 to 2/10 (0.0038 to 0.0075)	12

NON-AGRICULTURAL USES

NON-CROP SITES
Application Information
Use Tide MSM 60 DF Herbicide for general weed control on private, public and military lands as follows: Uncultivated areas (including airports, highway, railroad and utility rights-of-way, sewage disposal areas); uncultivated agricultural areas – non-crop producing (including farmyards, fuel storage areas, fence rows, soil bank land, barrier strips); industrial sites – outdoor (including lumberyards, pipeline and tank farms). Also use for the control of certain noxious and troublesome weeds.

WEEDS CONTROLLED

1/3 to 1/2 Ounce (0.0125 to 0.0187 Lb AI) Per Acre

Annual sow thistle
Aster
Bahiagrass
Beebalm
Bittercress
Bitter sneezeweed
Blackeyed Susan
Blue mustard
Bur buttercup
Chicory
Clover
Cocklebur
Common chickweed
Common groundsel
Common purslane
Common yarrow
Conical catchfly
Corn cockle
Cow cockle
Crown vetch
Dandelion
Dogfennel
False chamomile
Fiddleneck tarweed
Field pennycress
Flix weed
Goldenrod
Lambsquarters
Marestail/horseweed ****
Maximillion sunflower
Miners lettuce
Pennsylvania smartweed
Plains coreopsis
Plantain
Redroot pigweed
Redstem filaree
Rough fleabane
Shepherd's-purse
Silky crazyweed (locoweed)
Smallseed falseflax
Smooth pigweed
Sweet clover
Tansymustard
Treacle mustard
Tumble mustard
Wild carrot
Wild garlic
Wild lettuce
Wild mustard
Wooly Croton
Wood sorrel
Yankeeweed

1/2 to 1 Ounce (0.0187 to 0.0375 Lb AI) Per Acre

Blackberry
Black henbane
Broom snakeweed
Buckhorn plantain
Bull thistle
Common crupina
Common sunflower
Curly dock
Dewberry
Dyer's woad
Gorse
Halogeton
Henbit
Honeysuckle
Multiflora rose and other wild roses
Musk thistle***
Oxeye daisy
Plumeless thistle
Prostrate knotweed
Rosering gaillardia
Seaside arrowgrass
Sericea lespedeza
Tansy ragwort
Teasel

Wild caraway

1 to 2 Ounces (0.0375 to 0.075 Lb AI) Per Acre

Common mullein
Common tansy
Field bindweed**
Greasewood
Gumweed
Houndstongue
Lupine
Old world climbing fern
(Lygodium)
Perennial pepperwood
Poison hemlock
Purple loosestrife
Purple scabious
Scotch thistle
Scouringrush
Salsify
Snowberry
St. Johnswort
Sulphur cinquefoil
Western salsify
Whitetop (hoary cress)
Wild iris

1-1/2 to 2 Ounces (0.0562 to 0.075 Lb AI) Per Acre
Canada thistle**
Dalmation toadflax**
Duncecap larkspur
Russian knapweed**
Tall larkspur
Wild parsnip
Yellow toadflax**

3 to 4 Ounces (0.1125 to 0.15 Lb AI) Per Acre
Kudzu

* Apply fall through spring.
** Suppression, which is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Apply as a full coverage spray for best performance.
*** Certain biotypes of musk thistle are more sensitive to Tide MSM 60 DF Herbicide and may be controlled with rates of ¼ to ½ ounce (0.0093 to 0.0187 lb ai) per acre. Treatments of Tide MSM 60 DF Herbicide can be applied from rosette through bloom stages of development.
**** Certain biotypes of marestail/horsetail are less sensitive to Tide MSM 60 DF Herbicide and may be controlled by tank mixes with Herbicides with a different mode of action.

PROBLEM WEED CONTROL
For broader spectrum control and for use on certain biotypes of broadleaf weeds, which may be resistant to Tide MSM 60 DF Herbicide and herbicides with the same mode of action, use the following tank mixes.

Dicamba + 2,4-D

Weed	Rate of Tide MSM 60 DF Herbicide ounces per acre (lb ai per acre)	Rate of Dicamba (fl oz/acre)	Rate of 2,4-D (fl oz/acre)
Kochia control	½ (0.0187)	8	16
Spotted knapweed control	½ (0.0187)	8	16
Rush skeleton weed suppression	1 (0.0375)	8	16

Consult the “Weeds Controlled” and “Brush Species Controlled” tables to determine the appropriate application rate.

Tide MSM 60 DF Herbicide can be applied in tank mixture with other Herbicides labeled for use on non-crop sites. Fully read the labels and follow all the directions and restrictions on each label.

Apply by ground or air. Use a sufficient volume of water to ensure thorough coverage of the target vegetation with the application equipment being used.

Application Timing
For best results, apply Tide MSM 60 DF Herbicide postemergence to young, actively growing weeds. Apply at any time of the year, except when the ground is frozen.

Restrictions:

- **DO NOT** use more than 4 oz (0.15 lb ai) of Tide MSM 60 DF Herbicide per acre per year
- **DO NOT** use more than 4 oz (0.15 lb ai) of Tide MSM 60 DF Herbicide per acre per application
- **DO NOT** exceed 1 application per year

GRASS REPLANT INTERVALS
If replanting following an application of Tide MSM 60 DF Herbicide to non-crop areas, replant the treated sites with various species of grasses at the intervals specified below.

For soils with a pH of 7.5 or less, observe the following replant intervals:

Species	Rate ounces per acre (lb ai per acre)	Replant Interval (months)
Brome, Meadow	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 3
Brome, Smooth	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4
Fescue, Alta	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4
Fescue, Red	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4
Fescue, Sheep	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	1 4
Foxtail, Meadow	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4

Green Needlegrass	½ - 2 (0.0187 to 0.075)	1
Orchard grass	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4
Russian Wild rye	½ - 1 (0.0187 to 0.0375) 1 (0.0375) 2 (0.075)	1 2 3
Switch grass	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	1 3
Timothy	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 4
Wheatgrass, Western	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	2 3

For soils with a pH of 7.5 or greater, observe the following replant intervals:

Species	**Rate ounces per acre (lb ai per acre)**	**Replant Interval (months)**
Alkali Sacaton	½ - 1 (0.0187 to 0.0375) 1-2 (0.0375 to 0.075)	1 3
Bluestem, Big	½ - 2 (0.0187 to 0.075)	3
Brome, Mountain	½ - 1 (0.0187 to 0.0375) 1 – 2 (0.0375 to 0.075)	1 2
Gramma, Blue	½ - 2 (0.0187 to 0.075)	1
Gramma, Sideoats	½ (0.0187) >½ (>0.0187)	2 >3
Switch grass	½ (0.0187) >½ (>0.0187)	2 >3
Wheatgrass, Thickspike	½ - 2 (0.0187 to 0.075)	1

Species	Rate ounces per acre (lb ai per acre)	Replant Interval (months)
Wheatgrass, Western	1 – 2 (0.0375 to 0.075) ½ - 1 (0.0187 to 0.0375)	2 3

The listed intervals are for applications made in the spring to early summer. Because Tide MSM 60 DF Herbicide degradation is slowed by cold or frozen soils, consider the intervals for applications made in the late summer or fall as beginning in the spring following treatment.

Testing has indicated that there is considerable variation in response among the species of grasses when seeded into areas treated with Tide MSM 60 DF Herbicide. If species other than those listed above are to be planted into areas treated with Tide MSM 60 DF Herbicide, perform a field bioassay, or use previous experience, to determine the feasibility of replanting treated sites.

TURF, INDUSTRIAL (UNIMPROVED ONLY)
Application Information
Use Tide MSM 60 DF Herbicide for selective weed control in unimproved industrial turf where certain grasses are well established and desired as ground cover and for the control of certain noxious and troublesome weeds in turf.

In addition to conventional spray equipment, Tide MSM 60 DF Herbicide can also be applied with invert emulsion equipment. When using an invert emulsion, mix the prescribed rate of Tide MSM 60 DF Herbicide in the water phase.

Consult the “Weeds Controlled” table to determine which weeds will be controlled by the following directions.

Turf Type	Rate of Tide MSM 60 DF Herbicide ounces/acre (lbs ai/acre)
Fescue and Bluegrass	¼ to ½ (0.0093 to 0.0187)
Crested Wheatgrass and Smooth Brome	¼ to 1 (0.0093 to 0.0375)
Bermudagrass	¼ to 2 (0.0093 to 0.075)

Application Timing
Apply at any time of the year, except when the soil is frozen.

If a second application is needed after a spring application is made on fescue or bluegrass, make the second application during the summer after full seedhead maturation.

IMPORTANT INFORMATION--INDUSTRIAL TURF ONLY
- An application of Tide MSM 60 DF Herbicide may cause temporary discoloration (chlorosis) of the grasses. Use the lower specified rates for minimum discoloration.
- With fescue and bluegrass, sequential applications made during the same or consecutive growth period (i.e., spring and fall) may result in excessive injury to turf.
- Excessive injury may result when Tide MSM 60 DF Herbicide is applied to turf that is under stress from drought, insects, disease, cold temperatures (winter injury) or poor fertility.

Restrictions:

- **DO NOT** use Tide MSM 60 DF Herbicide on bahiagrass.
- **DO NOT** use more than 2 ounces (0.075 lb ai) per acre of Tide MSM 60 DF Herbicide per application.
- **DO NOT** use more than 2 ounces (0.075 lb ai) per acre of Tide MSM 60 DF Herbicide per year.
- **DO NOT** exceed 1 application per year.

GROWTH SUPPRESSION AND SEEDHEAD INHIBITION
(Chemical Mowing)

Application Information
Use Tide MSM 60 DF Herbicide for growth suppression and seedhead inhibition in well-established fescue and bluegrass turf at the use rate of ¼ to ½ ounce (0.0093 to 0.0187 lb ai) per acre.

Application Timing
Apply after at least 2 to 3 inches of new growth has emerged until the appearance of the seed stalk.

Fescue Precautions and Restrictions:
Tide MSM 60 DF Herbicide may temporarily stunt tall fescue, cause it to turn yellow, or cause seedhead suppression. To minimize these symptoms, observe the following precautions and restrictions:

Precautions:

- Tank mix Tide MSM 60 DF Herbicide with 2,4-D.
- Use the lowest specified rate for target weeds.
- Use a non-ionic surfactant at ½ to 1 pint per 100 gallons of spray solution.
- Make application later in the spring after the new growth is 5 to 6 inches tall, or in the fall.
- The yields from the first cutting may be reduced due to seedhead suppression resulting from treatment with Tide MSM 60 DF Herbicide.

Restrictions:

- **DO NOT** use more than 4/10 ounce (0.015 lb ai) per acre of Tide MSM 60 DF Herbicide per application.
- **DO NOT** use more than 4/10 ounce (0.015 lb ai) per acre of Tide MSM 60 DF Herbicide per year.
- **DO NOT** exceed 1 application per year.
- **DO NOT** use a surfactant when liquid nitrogen is used as a carrier.
- **DO NOT** use a spray adjuvant other than non-ionic surfactant.

NATIVE GRASSES
Use Tide MSM 60 DF Herbicide for weed control and suppression in the establishment and maintenance of native grasses. It can be used where blue grama, bluestems (big, little, plains, sand, ww spar) bromegrasses (meadow), buffalograss, green sprangletop, indiangrass, kleingrass, lovegrasses (atherstone, sand, weeping, wilman), orchardgrass, sideoats grama, switchgrass (Blackwell), wheatgrass (bluebunch, intermediate, pubescent, Siberian, slender streamband, tall, thickspike, western), and Russian wildrye are established. It may also be applied over these species in the seedling stage, except for orchardgrass and Russian wildrye.

Application Information
Apply Tide MSM 60 DF Herbicide at the rate of 1/10 ounce (0.0038 lb ai) per acre for the control and suppression* of bur buttercup (testiculate), common purslane, common sunflower*, cutleaf evening primrose*, flixweed*, lambsquarters* (common and slimleaf), marestail*, pigweed (redroot and tumble), snow speedwell, tansymustard* and tumble mustard (Jim Hill mustard).

*Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Degree of suppression will vary with the size of weed and environmental conditions following treatment.

Application Timing
For established grasses, apply when weeds are in the seedling stage.

For grasses in the seedling stage, apply preplant or preemergence where the soil (seedbed) has been cultivated.

IMPORTANT PRECAUTIONS--NATIVE GRASSES

- Grass species or varieties may differ in their response to various herbicides. Consult your state experimental station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of Tide MSM 60 DF Herbicide to a small area. Components in a grass seed mixture will vary in tolerance to Tide MSM 60 DF Herbicide, so the final stand may not reflect the seed ratio.
- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after Tide MSM 60 DF Herbicide application, temporary discoloration and/or grass injury may occur. **DO NOT** apply Tide MSM 60 DF Herbicide to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soils, disease, or insect damage as grass injury may result. Severe winter stress drought, disease, or insect damage before or following application also may result in grass injury.

Restrictions:

- **DO NOT** use more than 1/10 ounce (0.0038 lb ai) per acre of Tide MSM 60 DF Herbicide per application.
- **DO NOT** use more than 1/10 ounce (0.0038 lb ai) per acre of Tide MSM 60 DF Herbicide per year.
- **DO NOT** exceed 1 application per year.

BRUSH CONTROL

Application Information
Use Tide MSM 60 DF Herbicide for the control of undesirable brush growing in non-crop areas. Apply by air, high volume ground application, low volume ground application, and ultra-low volume ground application. Except as noted for multiflora rose, apply Tide MSM 60 DF Herbicide as a spray to the foliage.

The application volume required will vary with the height and density of the brush and the application equipment used. Generally, aerial applications will require 15 to 25 gallons of water per acre; high volume ground application will require 100 to 400 gallons of water per acre; and low volume ground application will require 20 to 50 gallons of water per acre; and ultra-low volume ground application will require 10 to 20 gallons of water per acre.

Regardless of application volume and equipment used, thorough coverage of the foliage, particularly the terminal growing points, is necessary to optimize results.

BRUSH SPECIES CONTROLLED

Species	High-Volume Rate ounces/100 gallons (lb ai/100 gallons)	Broadcast Rate (ounces/acre)
Ash	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Aspen	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Black Locust	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Blackberry	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Camelthorn	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Cherry	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Cottonwood	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Eastern Red Cedar	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Elder	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Elm	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Firs	3 (0.1125)	1-2 (0.0375-0.075)
Hawthorn	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Honeysuckle	1-2 (0.0375-0.075)	½-1 (0.0187-0.0375)
Mulberry	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Multiflora Rose	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Muscadine (Wild Grape)	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Oaks	1-2 (0.0375-0.075)	1-3 (0.0375-0.1125)
Ocean Spray (*Holodiscus)*	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Osage Orange	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Red Maple	1-2 (0.0375-0.075)	2-3 (0.075-0.1125)
Salmonberry	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)
Snowberry	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)
Spruce (Black and White)	3 (0.1125)	2-3 (0.075-0.1125)
Thimbleberry	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)
Tree of Heaven *(Ailanthus)*	1-2 (0.0375-0.075)	1-2 (0.0375-0.075)

Species	High-Volume Rate ounces/100 gallons (lb ai/100 gallons)	Broadcast Rate (ounces/acre)
Tulip Tree	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)
Wild Roses	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)
Willow	½-1 (0.0187-0.0375)	1-3 (0.0375-0.1125)

For low volume and ultra-low volume ground applications, mix 4 to 8 ounces of Tide MSM 60 DF Herbicide (0.15 to 0.3 lb ai) per 100 gallons of spray solution.

Application Timing
Make a foliar application of the specified rate of Tide MSM 60 DF Herbicide during the period of full leaf expansion in the spring until the development of full fall coloration on the deciduous species to be controlled. Treat coniferous species at any time during the growing season.

Tank Mix Combinations
Tide MSM 60 DF Herbicide can be tank mixed with any product labeled for noncrop brush control at the application rates specified on the companion product's label for the pests specified on the product's companion label. Read and follow the label instructions of both products when tank mixing. Follow the most restrictive limitations of any of the products labels being tank mixed.

Low Rate Applications

Arsenal® herbicide (Imazapyr, isopropylamine salt, EPA Reg. No. 241-346)
Combine 1 to 2 ounces of Tide MSM 60 DF Herbicide (0.0375 to 0.075 lb ai) with 1 to 4 pints of Arsenal® herbicide (Imazapyr, isopropylamine salt, EPA Reg. No. 241-346) per acre and apply as a broadcast spray. For aerial applications, use a minimum of 15 gallons per acre spray volume. In addition to species listed above controlled by Tide MSM 60 DF Herbicide, this combination controls black gum, hophornbeam, sassafras, sweetgum, Vaccinium species, dogwood, myrtle dahoon, hickories, and persimmon.

Picloram (such as Tordon® K (EPA Reg. No. 62719-17)) + Arsenal® herbicide (Imazapyr, isopropylamine salt, EPA Reg. No. 241-346)
Combine 1 to 1 ½ ounce of Tide MSM 60 DF Herbicide (0.0375 to 0.0562 lb ai) with 2 to 8 fluid ounces of Arsenal® (Imazapyr, isopropylamine salt, EPA Reg. No. 241-346) and 1 to 2 pints of Picloram (such as Tordon® K (EPA Reg. No. 62719-17)) per 100 gallons of water. Apply as a high volume spray. This tank mix controls cherry, elms, box elder, maples, hackberry, redbud, ash, oaks (including shingle oak), black locust and sassafras.

Picloram (such as Tordon® K (EPA Reg. No. 62719-17)) is a restricted use pesticide

Spotgun Basal Soil Treatment
For control of multiflora rose, prepare a spray suspension of Tide MSM 60 DF Herbicide by mixing 1 ounce (0.0375 lb ai) per gallon of water. Mix vigorously until the Tide MSM 60 DF Herbicide is dispersed and agitate periodically while applying the spray suspension.

Apply the spray preparation with an exact delivery handgun applicator. Apply at the rate of 4 milliliters for each 2 feet of rose canopy diameter. Direct the treatment to the soil within 2 feet of stem union. When treating large plants and more than one delivery is required, make applications on opposite sides of the plant.

Make applications from early spring to summer.

When using tank mixtures of Tide MSM 60 DF Herbicide with companion Herbicides, read and follow all the use instructions, application rates, warnings and precautions appearing on the labels. Follow the most restrictive label instruction for each of the Herbicides used.

SPRAY EQUIPMENT
Spraying and mixing equipment used with Tide MSM 60 DF Herbicide must not be used for subsequent application to food or feed crops with the exception of pastures, rangeland and wheat, as low rates of Tide MSM 60 DF Herbicide can kill or severely injure most food or feed crops.

The selected sprayer must be equipped with an agitation system to keep Tide MSM 60 DF Herbicide suspended in the spray tank.

Use a sufficient volume of water to thoroughly cover the foliage of undesirable weeds, generally 10 to 40 gallons per acre. Select a spray volume and delivery system that will deliver a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to desired plants.

Refer to the brush control section of this label for information unique to that particular use.

PRECAUTIONS

- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to Tide MSM 60 DF Herbicide may injure or kill most crops. Injury may be more severe when crops are irrigated. **DO NOT** apply Tide MSM 60 DF Herbicide when these conditions are identified and powdery, dry soil or light, and sandy soils are known to be prevalent in the area being treated.
- Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, to surfaces paved with materials such as asphalt or concrete, or to soils through which rainfall will not readily penetrate may result in runoff and movement of Tide MSM 60 DF Herbicide. **DO NOT** treat frozen soil. Leave treated soil undisturbed to reduce the potential for Tide MSM 60 DF Herbicide movement by soil erosion due to wind or water.
- Spraying and mixing equipment used with Tide MSM 60 DF Herbicide must not be used for subsequent application to food or feed crops with the exception of pastures, rangeland, and wheat, as low rates of Tide MSM 60 DF Herbicide can kill or severely injure most food or feed crops**.**
- Applications of Tide MSM 60 DF Herbicide to pastures, rangeland or CRP undersown with legumes may cause injury to the legumes. Legumes in a seeding mixture may be severely injured or killed following an application of Tide MSM 60 DF Herbicide.
- When used as directed, there are no grazing or haying restrictions for use rates of 1 2/3 ounces (0.0625 lb ai) per acre and less (see RESTRICTIONS section for grazing restrictions at higher use rates).

RESTRICTIONS:

- **DO NOT** exceed 8 ounces of Tide MSM 60 DF Herbicide (0.3 lb ai) per 100 gallons of spray solution for low volume and ultra-low volume ground applications.
- **DO NOT** exceed 3 ounces of Tide MSM 60 DF Herbicide (0.1125 lb ai) per 100 gallons of spray solution for high volume ground applications.
- **DO NOT** exceed 3 ounces of Tide MSM 60 DF Herbicide (0.1125 lb ai) per acre per application for broadcast applications.
- **DO NOT** exceed 1 application per year.
- **DO NOT** apply through any type of irrigation system.

- **DO NOT** apply to irrigated land where the tailwater will be used to irrigate crops.
- **DO NOT** apply to snow-covered ground.
- **DO NOT** use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos
- **DO NOT** use this product in California.
- **DO NOT** use on grasses grown for seed.
- When making application at use rates of 1 2/3 to 3 1/3 ounces (0.0625 to 0.125 lb ai) per acre, wait 3 days after treatment to cut forage grasses for hay, fodder or green forage and feeding to livestock, including lactating animals (there are no grazing restrictions for use rates of 1 2/3 oz/acre (0.0625 lb ai/acre) or less).
- **DO NOT** drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the product may be washed or moved into contact with their roots, as injury or loss of desirable trees or other plants may result.

TURF AND ORNAMENTAL

Tide MSM 60 DF Herbicide IS FOR USE ON Ornamental Turf, such as Lawns, Parks, Cemeteries, and Golf Courses (Fairways, Aprons, Tees and Roughs). This product can also be used on Sod Farms.

[For Industrial Turf use, see ***TURF, INDUSTRIAL (UNIMPROVED ONLY)*** section.]

Tide MSM 60 DF Herbicide controls the following perennial and annual weedy grasses:

Annual Sowthistle	Crown Vetch	Redroot Pigweed
Aster	Curly Dock	Redstem Filaree
Bittercress	Dandelion	Shepherdspurse
Blue Mustard	Dog Fennel	Smallseed Flaxweed
Buckhorn	False Chamomile	Smooth Pigweed
Bur Buttercup	Fiddleneck Tarweed	Spurge (prostrate)
Canada Thistle	Field Pennycress	Sweet Clover
Carolina Geranium	Flixweed	Tansy Mustard
Chicory	Goldenrod	Treacle Mustard
Clover (white)	Henbit	Tumble Mustard
Common Chickweed	Hoary Cress (whitetop)	Virginia Buttonweed
Common Groundsel	Kochia	Wild Carrot
Common Mullein	Lambsquarters	Wild Celery
Common Purslane	Miners Lettuce	Wild Garlic
Common Sunflower	Pennsylvania Smartweed	Wild Lettuce
Common Yarrow	Plantain	Wild Mustard
Conical Catchfly	Prickly Lettuce	Wild Onion
Cow Cockle	Prostrate Knotweed	Wood Sorrel (oxalis)

For use only on Kentucky Bluegrass, fine Fescue, Bermudagrass and St. Augustine grass turf areas.

PRECAUTIONS:

- Use lower rates for minimum chlorosis of the turf.

RESTRICTIONS:

- **DO NOT** use more than 1 ounce (0.0375 lb ai) per acre per application.
- **DO NOT** use more than 2 ounces (0.15 lb ai) per acre per year.
- **DO NOT** exceed 2 applications per year.
- **DO NOT** retreat with Tide MSM 60 DF Herbicide within 4 weeks.
- **DO NOT** apply to turf less than 1 year old.
- **DO NOT** plant ornamentals such as shrubs, and trees in treated areas for at least 1 year after the last application, or bedding plants for at least 2 years.
- **DO NOT** apply Tide MSM 60 DF Herbicide to turf under stress from drought, insects, disease, cold temperatures, high temperatures of above 85°F on cool season grasses, or poor fertility as injury may result.
- **DO NOT** use on bahiagrass where it is the desired turf, as severe injury may result.

APPLICATION INFORMATION

Addition of non-ionic surfactant of at least 80% active ingredient at 0.25 percent by volume (1 qt/gal) provides maximum performance, but may temporarily increase chlorosis of the turf.

Allow one week between the application of Tide MSM 60 DF Herbicide and other control (pesticide containing) products. (This guideline can be relaxed where severe insect or disease attack requires immediate treatment).

DO NOT USE ON FOOD OR FEED CROPS. Injury to or loss of desirable trees or other plants may result from failure to observe the following: **DO NOT** apply Tide MSM 60 DF Herbicide (except as directed) or drain or flush equipment on or near desirable trees or other plants. Or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.

When overseeding, wait 2 months (8 weeks) after application. **DO NOT** apply to any body of water including streams, irrigation water or wells. **DO NOT** apply where runoff water may flow onto agricultural land, as injury to crops may result.

DO NOT allow spray drift onto adjacent crops or other desirable plants or trees as injury may occur.

HOW TO USE

Use spray volumes of 20 to 80 gal/acre and pressures of 25 to 35 psi at the following rates of Tide MSM 60 DF Herbicide for the weeds listed below:

0.125 to 0.25 oz. PRODUCT/ACRE (0.0046 to 0.0093 lb ai/ACRE)

Ryegrass (greens)

0.25 to 0.33 oz. PRODUCT/ACRE (0.0093 to 0.0123 lb ai/ACRE)

Bittercress
Blue Mustard
Bur Buttercup
Chickweed
Chicory
Clover (white)
Creeping Beggarweed
Dandelion
Field Pennycress
Ground Ivy (Fall)
Parsley-piert
Prostrate Spurge
Redstem Filaree
Spurweed
Wild Carrot

0.33 to 0.5 oz. PRODUCT/ACRE (0.0123 to 0.0187 lb ai/ACRE)

Annual Sowthistle
Aster
Carolina Geranium
Common Yarrow
Crown Vetch
Florida Betony
Ground Ivy (Spring*)
Henbit
Lambsquarters
Lespedeza
Miners Lettuce
Plantain
Prickly Lettuce
Ragweed
Redroot Pigweed
Ryegrass (fairways)
Seedling Dogfennel
Shepherdspurse
Smooth Pigweed
Smallseed Falseflax
Sweet Clover
Tansy Mustard
Treacle Mustard
Tumble Mustard
Wild Celery
Wild Garlic
Wild Lettuce
Wild Onion
Woodsorrels (oxalis)

0.25 to 0.75 oz. PRODUCT/ACRE (0.0093 to 0.0281 lb ai/ACRE)

Bahiagrass*

0.5 to 1 oz. PRODUCT/ACRE (0.0187 to 0.0375 lb ai/ACRE)

Brazil Parsley
Buckhorn Plantain
Canada Thistle**
Curly Dock
Common Groundsel
Common Purslane
Common Sunflower
Crabgrass
Dogfennel
Dollarweed*
Florida Pusley
Foxtail
Hoarycress (whitetop)
Kochia
Pennsylvania Smartweed
Plantain
Prostrate Knotweed
Sida (southern)
Virginia Buttonweed***
Wild Mustard

* A repeat application may be required in 4 to 6 weeks.
** Suppression only involving a visual reduction in competition compared to an untreated area.
*** Controls seedling Virginia Buttonweed. Suppression only of more mature plants. Repeat application may be required in 4 to 6 weeks.

Add the required amount of Tide MSM 60 DF Herbicide when the spray tank is half full of water and, with agitator running, add the proper amount of product. Finish adding the required amount of water. Continuous agitation is required to keep the product in suspension.

Spray preparations of this product may degrade in acid solutions if not used in 24 hours; it is stable in alkaline solutions. Thoroughly reagitate before using.

Test tank mixes with other registered Herbicides for compatibility before full scale mixing. Use mechanical or bypass agitation to thoroughly mix the spray suspension. It is not necessary to premix this product with water in a separate container prior to adding it to the spray tank. Always add this product to the tank first, before any other Herbicides or adjuvants.

Use on Kentucky Bluegrass and Fine Fescue
Apply 0.25 to 0.5 oz. of Tide MSM 60 DF Herbicide (0.0093 to 0.0187 lb ai) per acre for control of the listed weeds. **DO NOT** exceed 0.5 oz. (0.0187 lb ai) per acre within a 9-months period.

Use on St. Augustinegrass, Bermudagrass and Zoysiagrass (Meyers and Emerald)
Apply 0.25 to 1.0 oz. Tide MSM 60 DF Herbicide (0.0093 to 0.0375 lb ai) per acre for weed control. Some chlorosis or stunting of the turfgrass may occur following application.

Bahiagrass Control
For the selective control of Bahiagrass in Bermudagrass turf, use 0.25 to 0.75 oz. of Tide MSM 60 DF Herbicide (0.0093 to 0.0281 lb ai) per acre. Use the higher rates of the range on Argentine, Common and Paraguayan Bahiagrass. Apply a repeat treatment in 4 to 6 weeks if necessary. Some chlorosis or stunting of the Bermudagrass may occur following the application.

Use on Centipedegrass
Apply 0.25 to 0.5 oz. of this product (0.0093 to 0.0187 lb ai) per acre for weed control. Some chlorosis or stunting of the turfgrass may occur following the application.

IMPORTANT
Addition of a nonionic surfactant of at least 80% active ingredient at 0.25% by volume (1 qt/100 gals) provides maximum performance, but may temporarily increase chlorosis of the turf.

Allow one week between the application of Tide MSM 60 DF Herbicide and other control (pesticide-containing) products. (This guideline can be relaxed where a severe insect or disease attack requires immediate treatment.)