



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

249329

## Application for Pesticide - Section I

1. Company/Product Number 7969-88	2. EPA Product Manager Robert Taylor	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Torpedo Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation P.O. Box 13528 Research Triangle Park, NC 27709 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of change in packaging: add directions for use with Prodigy delivery system.

See attachment for compliance statement as per PR Notice 95-2.

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input checked="" type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	<input checked="" type="checkbox"/> Plastic	
		If "Yes" Package wgt.	No. per container	<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 2 1/2 gallon & 55 gal.		5. Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Charlotte Sanson	Title Sr. Registration Spec.	Telephone No. (Include Area Code) 919-361-5483
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature Charlotte A. Sanson	3. Title Sr. Registration Specialist	
4. Typed Name Charlotte Sanson	5. Date October 20, 1995	

**BASF**

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MK \_\_\_\_\_

# Torpedo®

herbicide

**Active Ingredient:**

Sethoxydim 2-[1-(ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one\* ..... 13.0%

**Inert Ingredients:** ..... 87.0%

**Total** ..... 100.0%

\*Equivalent to 1 pound per gallon

EPA Reg. No. 7969-88

**KEEP OUT OF REACH OF CHILDREN.**

## CAUTION

**Statement of Practical Treatment**

**If in eyes:** Flush with plenty of water. Call a physician if irritation persists.

**If on skin:** Wash with plenty of soap and water. Get medical attention.

**If swallowed:** Promptly drink a large quantity of milk, egg whites, gelation solution, or, if these are not available, large quantities of water. Avoid alcohol.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the **Directions For Use** for information about this standard.

**Net contents: 2.5 gallons**

BASF Corporation  
P.O. Box 13528, Research Triangle Park, NC, 27709

## Precautionary Statements HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

Causes moderate eye injury.  
Harmful if swallowed or absorbed  
through skin. Avoid contact with  
skin, eyes or clothing.

### Personal Protective Equipment:

Some materials that are chemical-  
resistant to this product are listed  
below. If you want more options,  
follow the instructions for category  
**E** on an EPA chemical resistance  
category selection chart.

### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such  
as barrier laminate, nitrile rubber  $\geq$   
14 mils, neoprene rubber  $\geq$  14  
mils, or viton  $\geq$  14 mils
- Shoes plus socks

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

### Engineering Controls Statement

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

### User Safety Recommendations Users should:

- Wash hands before eating, drink-  
ing, chewing gum, using tobacco,  
or using the toilet.
- Remove clothing 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 remov-  
ing. As soon as possible, wash  
thoroughly and change into clean  
clothing.

### Environmental Hazards

For terrestrial uses, do not apply  
directly to water or to areas where  
surface water is present or to inter-  
tidal areas below the mean high  
water mark. Do not contaminate  
water when disposing of equipment  
washwaters.

### Endangered Species Concerns

This product is toxic to aquatic  
organisms.

For terrestrial uses, do not apply  
directly to water or to areas where  
surface water is present or to inter-  
tidal areas below the mean high  
water mark. Do not contaminate  
water when disposing of equipment  
wash waters.

### Directions For Use

It is a violation of federal law to use  
this product in a manner inconsis-  
tent 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 responsible for pesticide  
regulation.

### Agricultural Use Requirements

Use this product only in accor-  
dance with its labeling and with the  
Worker Protection Standard, 40  
CFR part 170. This standard con-  
tains requirements for the protec-  
tion of agricultural workers on  
farms, forests, nurseries, and  
greenhouses, and handlers of agri-  
cultural pesticides. It contains  
requirements for training, deconta-  
mination, notification, and emer-  
gency assistance. It also contains  
specific instructions and excep-  
tions pertaining to the statements  
on this label about personal protec-  
tive equipment (PPE), and restrict-  
ed-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 12  
hours.

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

- Coveralls
- Chemical-resistant gloves such  
as barrier laminate, nitrile rubber  
 $\geq$  14 mils, neoprene rubber  $\geq$  14  
mils, or viton  $\geq$  14 mils
- Shoes plus socks

### In Case of Emergency

In case of large-scale spillage  
regarding this product call:  
CHEMTREC.....800-424-9300  
BASF Corporation..800-832-HELP

In case of medical emergency  
regarding this product, call:

1. Your local doctor for immediate  
treatment
2. Your local poison control center  
(hospital)
3. BASF Corporation 800-832-HELP

### Storage and Disposal

Do not contaminate water, food, or  
feed by storage or disposal.

Pesticide wastes are toxic.  
Improper disposal of excess pesti-  
cide, spray mixture or rinsate is a  
violation of federal law. If these  
wastes cannot be disposed of  
according to label instructions, con-  
tact your State Pesticide or  
Environmental Control Agency, or  
the Hazardous Waste representa-  
tive at the nearest EPA Regional  
Office for guidance.

Triple rinse container (or equivalent).  
Then offer for recycling or recondi-  
tioning, or puncture and dispose of  
in a sanitary landfill, by incineration,  
or, if allowed by state and local  
authorities, by burning. If burned,  
stay out of smoke.

### General Information

**Torpedo® herbicide** is a selective  
broad spectrum postemergence  
herbicide that may be used to con-  
trol and suppress annual and  
perennial grass weeds in bearing or  
nonbearing orange, lemon, lime,  
grapefruit, tangerine, and tangerine  
hybrid crops.

**Torpedo** does not control sedges  
or broadleaf weeds. Because all  
grass crops (such as sorghum,  
corn, small grains, and rice), as well  
as ornamental grasses such as turf,  
can be injured or killed by

**Torpedo**, avoid all direct or indirect  
contact with any desired grass  
plants.

### Nonbearing Citrus:

Citrus crops are tolerant to  
**Torpedo**, but under some condi-  
tions, a slight leaf speckling/leaf  
burn can occur. Citrus plants will  
outgrow these symptoms and later  
growth is not affected.

### Bearing Citrus:

**Torpedo** should be directed away  
from citrus foliage as well as devel-  
oping and mature fruit because  
injury may occur under certain con-  
ditions.

Consult **Restrictions and  
Limitations** for the preharvest

**Control Symptoms: Torpedo® herbicide** rapidly enters the plant through the foliage and translocates throughout the plant. Control symptoms exhibited by grasses progress from a slowing and stopping of growth (generally within 2 days), to reddening of foliage, and leaf tip burn. Later, burnback of the foliage occurs. These symptoms will generally be observed within 3 weeks, depending on environmental conditions.

### Prodigy™ System

**Torpedo** may be supplied in the **Prodigy System**, a unique, 120-gallon mini-bulk closed delivery system. It consists of a self-discharging tank that does not require any pumping mechanism, and has a dry lock connector which protects the user from exposure to tank contents.

Do not refill **Prodigy System**.

Return **Prodigy System** to BASF for cleaning and refilling.

**Torpedo** in a dedicated, returnable **Prodigy System** can only be used with the closed **Prodigy System** in which it comes packaged.

See **Prodigy System Operating Procedure** below.

### Prodigy System Operating Procedure

- 1) Install a male dry lock connector to the spray tank.
- 2) Connect the female dry lock connector (at the end of the hose attached to the tank) with the male dry lock connector installed on the spray tank.
- 3) Turn on the nitrogen gas supply.
- 4) Set measuring meter to zero.
- 5) Turn on the tank manifold until the desired amount of product, as indicated on the measuring meter, has been discharged into the spray tank.
- 6) Turn off the tank manifold to stop the discharge of product into the sprayer tank.
- 7) Disconnect the female dry lock connector on the tank hose from the male dry lock connector on the spray tank.
- 8) Turn off the nitrogen gas supply when the **Prodigy System** is empty, operation is completed or tank is ready to be returned to the point of purchase.

### Application Information

Apply **Torpedo** to actively growing grasses before they exceed the maximum growth stage in **Tables 1** and **2**.

Thorough coverage of grass foliage is essential because the effectiveness of **Torpedo** depends on the absorption and movement of **Torpedo** throughout the plant. For this to occur, enough leaf surface must be treated to absorb **Torpedo**, and the grass must be actively growing to translocate **Torpedo** to the roots and buds.

### Ground Applications

**Spray equipment: Torpedo** should be applied by handgun or boom application only. Direct the nozzles toward the grass foliage. Application to the soil is ineffective. Heavy tree growth that covers and protects grass weeds from spray coverage may reduce the activity of **Torpedo**.

**Nozzle selection:** Use standard high-pressure pesticide hollow cone or flat fan nozzles. Do not use flood or whirl chamber nozzles.

**Spray gallonage:** On a broadcast basis, 10-20 gallons of spray solution per acre should be used. Under most conditions, 10 gallons per acre is optimum.

**Spray pressure:** Adjust pressure to 40-60 psi (measured at the nozzle) when using standard high-pressure hollow cone or flat fan nozzles.

**Other spray equipment:** Do not apply **Torpedo** with control drop applicator (CDA) nozzles because erratic coverage can cause inconsistent weed control.

Do not use selective application equipment such as recirculating sprayers, wiper applicators, or shielded equipment.

### Addition of Crop Oil Concentrate

A nonphytotoxic crop oil concentrate (commonly referred to as crop oil concentrate) should always be added to the spray tank. The crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria:

- be nonphytotoxic
  - contain only EPA-exempt ingredients
  - provide good mixing quality in the jar test (see next section)
  - be successful in local experience.
- The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers that provide good mixing quality.

Highly refined vegetable oils have been observed to be more satisfactory than unrefined vegetable oils. For additional information, see **Jar Test for Estimating Suitability of Oil Concentrates**.

**Rate of Crop Oil Concentrate:**  
1% by volume

### Mixing

Fill the tank of a thoroughly clean sprayer half to two-thirds full with clean water. Start agitation and add oil concentrate; allow to mix thoroughly. Add **Torpedo** and the remaining volume of water. Apply **Torpedo** soon after mixing. Maintain constant agitation during application.

### Jar Test for Estimating Suitability of Oil Concentrates

- 1) **Water supply:** Use only water from the intended source and at the source temperature.
- 2) **Amount of water in jar:** For 20 gallons per acre spray volume, use 3 1/3 cups (800 ml) of water. For 10 gallons per acre spray volume, use 1 2/3 cups (400 ml) of water. For 5 gallons per acre spray volume, use 5/8 cup (200 ml) of water. For other spray volumes, adjust proportionately to above.
- 3) **Amount of herbicide and oil concentrate to add:** Add 1 teaspoon (5 ml) of herbicide and oil concentrate for each pint of recommended label rate.
- 4) Add components in following sequence, gently mixing between component additions:
  - a) Crop oil concentrate
  - b) **Torpedo**
- 5) **Cap jar**, invert 10 cycles, let stand for 15 minutes, evaluate.
- 6) **Evaluation:** An ideal tank mix combination will be uniform, thus, the suitability of the crop oil concentrate is questionable if any of the following are observed:

Free oil at the surface-film or globules.

Flocculation-fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.

Clabbering-thickening texture (coagulated) resembling yogurt or a curdlike texture as with cottage cheese.

**Attention!** Clean the sprayer thoroughly before and after applying **Torpedo® herbicide**, particularly if a herbicide with the potential to injure the crop was used. Failure to clean the sprayer thoroughly after applying **Torpedo** may result in injury to any grass crop subsequently sprayed, such as corn, sorghum, small grains, rice, and turf.

Fill the sprayer with clean water and add a commercial sprayer cleaner or a surfactant/adjuvant at the recommended rate on its label. Circulate the cleaning solution through the entire sprayer system. Spray approximately half the tank solution through the hoses, booms, and nozzles to clean these parts. Drain the tank and rinse the total system thoroughly several times with clean water.

### Recommendations for Grass Control — Citrus

Apply to actively growing grasses before tillering or seed head formation.

Follow **Water Volume and Spray Pressure** recommendations.

In irrigated areas, it may be necessary to irrigate before treating with **Torpedo** to ensure active weed growth.

Always add crop oil concentrate at 1% by volume.

### Spot Treatment Application

To control or suppress grasses when using knapsack sprayers or high-volume equipment (handguns or other suitable nozzle arrangement), prepare a solution of **Torpedo** plus oil concentrate in water according to **Table 3** or **4**, **Spot Treatment Application**. The best spray application will be a fine spray that will cover the leaves but not drench them and run off. By keeping the spray gallonage low, a relatively concentrated solution (1.5-2.25%) of **Torpedo** is used. The best performance is obtained 10-20 gallons of spray solution per acre. Do not make spot treatments in addition to broadcast treatments.

**Table 1. Annual Grass Control-Broadcast Application**

Grass	Torpedo (rate per acre)*		Crop Oil Concentrate (rate)
	Grass (up to 6")	Grass (up to 12")	
Barnyardgrass Crabgrass, Large , Smooth Foxtails: Giant , Green , Yellow Goosegrass Johnsongrass, Seedling Junglerice Millet, Wild Proso Orchardgrass, Seedling Panicum, Fall , Texas Shattercane/Wildcane Signalgrass, Broadleaf Sprangletop, Red Tall Fescue, Seedling Witchgrass Woolly Cupgrass	2.25 pints	3.75 pints	1% by volume
* Repeat applications as needed. Do not apply more than 15 pints per season.			

**Table 2. Perennial Grass Suppression-Broadcast Application**

Grass	Maximum Size	Torpedo (rate per acre)*	Crop Oil Concentrate (rate)
Bermudagrass (wiregrass)	Up to 6" runners	3.75 pints	1% by volume
Johnsongrass, Rhizome	15-20"		
Guineagrass	6" 8"	2.25 pints 3.75 pints	
Torpedograss	6" 8"	2.25 pints 3.75 pints	

\* Repeat applications as needed. Do not apply more than 15 pints per season.

**Table 3. Annual Grass Control-Spot Treatment Application Concentration in Spray Solution\***

Grass	Torpedo**		Crop Oil Concentrate
	Grass (up to 6")	Grass (up to 12")	
See annual grasses listed in <b>Broadcast Application Table</b> .	1.5%	2.25%	1%
* Refer to <b>Solution Table</b> for preparation of desired spray solution volume. ** Repeat applications as needed.			

**Table 4. Perennial Grass Suppression-Spot Treatment Application Concentration in Spray Solution\***

Grass	Maximum Size	Torpedo**	Crop Oil Concentrate
Bermudagrass (wiregrass)	Up to 6" runners	2.25%	1% by volume
Johnsongrass, Rhizome	15-20"	2.25%	
Quackgrass	6-8"	2.25%	
Wirestem Muhly	Up to 6"	1.5%	
* Refer to <b>Solution Table</b> for preparation of desired spray solution volume. ** Repeat applications as needed.			

**Table 5. Solution Table**

Desired Spray Solution Volume	Amount of Torpedo or Crop Oil Concentrate to be Added for Solution		
	Torpedo (1.5%)	Torpedo (2.25%)	Crop Oil Concentrate (1%)
1 gallon	1.9 fluid ounces	2.9 fluid ounces	1.3 fluid ounces
3 gallons	5.8 fluid ounces	8.75 fluid ounces	3.75 fluid ounces
5 gallons	9.5 fluid ounces	14.5 fluid ounces	6.4 fluid ounces
1 tablespoon = 1/2 fluid ounce			

#### Restrictions and Limitations

Citrus at all stages of growth is tolerant to **Torpedo® herbicide**. Do not apply to grasses under stress, such as stress due to lack of moisture, herbicide injury, mechanical injury or cold temperatures, as unsatisfactory control may result. Do not apply **Torpedo** if rainfall is expected within 1 hour following application as grass control will probably be unsatisfactory. Do not apply **Torpedo** within 15 days of harvesting fruit. Physical incompatibility, reduced weed control, or crop injury may result from mixing **Torpedo** with other pesticides, (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

BASF does not recommend using **Torpedo** tank mixes other than those listed on BASF labels, supplemental labels, or technical bulletins. Local agricultural authorities may be a source of information when using other than BASF-recommended combinations. Do not apply more than a total of 15 pints of **Torpedo** per acre in one season (including spot treatments). **Torpedo** may be applied to citrus by ground equipment only. Do not apply this product through any type of irrigation system. Citrus pulp and waste may be fed to animals. Do not allow applications of **Torpedo** to come in contact with developing or mature fruit.