



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 15 1999

555-2339

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. John S. Thornton, Director  
Product Registrations and Regulatory Affairs  
Bayer Corp., Agricultural Division  
P.O. Box 4913  
8400 Hawthorn Road  
Kansas City, MO 64120-0013

Dear Mr. Thornton:

Subject: Addition of Closed-Systems Labeling  
Monitor 4  
EPA Reg. No. 3125-280  
Labeling Submitted November 20, 1998

The labeling amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, As Amended (FIFRA), is acceptable, provided that you:

Submit one copy of your final printed label incorporating the following corrections before you release the product for shipment.

1. Add the word, "used" to the closed system statement so that it reads as stated below. This change is the result of recent communication received from our Special Review and Reregistration Division and is needed to maintain consistency with the current closed system labeling language requirements..

This product must be sold, distributed, and used in a dry-coupling mixing/loading system.

2. As stated in our letter of December 31, 1997, the practical treatment statements must appear on the front panel of the finished label. In lieu of their placement on the front panel, a reference as to their location on the label must appear on the front panel near the word, "Poison" and the skull and crossbones; i.e. "See statement of practical treatment on side panel."

It is understood that the word, "POISON" appears on the finished label in red on a contrasting background.

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If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended label constitutes acceptance of this condition.

A stamped copy of the label is enclosed for your records.

Sincerely,



Marilyn A. Mautz  
Biologist  
Insecticide-Rodenticide Branch  
Registration Division (7504C)

280-9259.YLD

U.S. LABEL

Base Pre-Reg (9259)

Reason to Issue: To add closed system requirements.

Date of Draft: 11/19/98 (K)

**RESTRICTED USE PESTICIDE**

Due to acute dermal toxicity and residue effects on avian species.  
For retail sale to, and use only by, Certified Applicators or persons under their direct supervision  
and only for those uses covered by the Certified Applicator's certification.

ACCEPTED  
COMMENTS  
EPA Letter Dated:  
JAN 15 1999  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the registered under EPA Reg. No. 3125-280

# Monitor® 4

## Liquid Insecticide

For effective insect control on cotton and potatoes.  
This product must be sold / distributed in a dry-coupling mixing / loading system.

|  |       |      |
|--|-------|------|
| ACTIVE INGREDIENT:                               |       |      |
| Methamidophos, O,S-Dimethyl phosphoramidothioate | ..... | 40%  |
| INERT INGREDIENTS:                               | ..... | 60%  |
|  |       | 100% |

Contains: 4 lb O,S-Dimethyl phosphoramidothioate per gallon  
Store in cool dry place but not below 15° F. Protect from heat

EPA Reg. No. 3125-280

**STOP - Read The Label Before Use**  
**KEEP OUT OF REACH OF CHILDREN**

**DANGER**



**POISON**

**PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER:** Do not inhale. Do not get on skin. Do not take internally.

**Fatal if swallowed.** May be fatal if inhaled or absorbed through skin. Do not breathe vapor or spray mist. Do not get in eyes, on skin or on clothing.

**ANTIDOTE:** - Atropine is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine.

**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 C on an EPA chemical-resistance category selection chart.

- Applicators and other handlers must wear:**
- Coveralls over short-sleeved shirt and short pants
  - Chemical-resistant gloves, such as barrier laminate or butyl rubber mils or nitrile rubber mils or neoprene rubber mils or polyvinyl chloride (PVC) or viton
  - Chemical-resistant footwear plus socks
  - Protective eyewear

# Monitor 4

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### Monitor 4 Liquid Insecticide

- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading
- A respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 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 [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, drinking, 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 removing. As soon as possible, wash thoroughly and change into clean clothing.

### STATEMENTS OF PRACTICAL TREATMENT

#### Organophosphate

**If swallowed:** Vomiting should be induced. Administer water freely and induce vomiting by giving one dose (1/2 oz or 15 mL) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Have patient lie down and keep quiet. Professional medical assistance should be secured

immediately. **If inhaled:** Remove patient to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical assistance immediately. **If on skin:** Remove contaminated clothing and immediately wash with soap and water. If signs of intoxication such as headache or nausea develop, get medical attention immediately. **If in eyes:** Wash with plenty of water for at least 15 minutes. Get medical attention.

### ENVIRONMENTAL HAZARDS

This product is extremely toxic to birds and other wildlife. Birds and other wildlife in treated areas may be killed. For terrestrial uses, 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 by

cleaning of equipment or disposal of wastes. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area or adjacent fields.

### 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 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 the

**AGRICULTURAL USE REQUIREMENTS Continued**

statements on this label about personal protective equipment (PPE), notification to workers, 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 48 hours.

The REI is 72 hours in outdoor areas where average rainfall is less than 25 inches a year.

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 treated, such as plants, soil or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or

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AGRICULTURAL USE REQUIREMENTS Continued

butyl rubber mills or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or viton

- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

IMPORTANT: Read these entire Directions and Conditions of Sale before using MONITOR 4 Liquid Insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS

AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

Use the designated amount of product in the following gallons of water per acre unless otherwise noted:

- Ground Application: 25 to 125 gallons of water
- Air Application: 3 or more gallons of water
- Chemigation: 1/8 to 1/4 inch of water

Not for use or storage in or around the home.

USE IN CHEMIGATION SYSTEMS

Types of Irrigation Systems

Apply MONITOR 4 only through sprinkler, including center pivot, lateral move, side roll, overhead solid set, or low pressure sprinkler irrigation systems. Do not apply MONITOR 4 through any other type of irrigation system.

GENERAL DIRECTIONS FOR ALL RECOMMENDED TYPES OF IRRIGATION SYSTEMS

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

The system must be calibrated to uniformly apply the rates specified for chemigation application for specific crops. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring: A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Drift: Do not apply when wind speed or conditions for a thermal inversion favors drift beyond the area intended for treatment.

Required System Safety Devices: The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems: DO NOT APPLY MONITOR 4 THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

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MONITOR 4 may be applied through any of the recommended types of irrigation systems which may be supplied by a public water system only if the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**Posting Requirements:** This sign is in addition to any sign posted to comply with the Worker Protection Standard. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements: Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must

remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2-1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER. Posting required for chemigation does not replace other posting and reentry interval requirements for farmworker safety.

**Agitation:** For application of MONITOR 4 alone, a chemical supply tank is not necessary for premixing since MONITOR 4 mixes well with water in the irrigation line. If a chemical supply tank is used for application of MONITOR 4, constant strong mechanical or hydraulic agitation must be maintained in the chemical supply tank the entire period of application.

**Chemical Supply Tank Dilution:** If a chemical supply tank is used, you must determine the required amounts of MONITOR 4 and water to mix in the tank.

The amount of MONITOR 4 needed equals the number of pints of MONITOR 4 to be applied per acre multiplied by the number of acres to be chemigated.

The amount of emulsion needed equals the gallons of emulsion delivered per hour by the injection pump multiplied by the number of hours chemigation will take place.

The amount of water needed equals the amount of solution needed minus the amount of MONITOR 4 needed.

For example, if you want to apply 2 pints of MONITOR 4 per acre to 130 acres in 20 hours and your injection pump delivers 15 gallons per hour, you need: 2 pints of MONITOR 4 per acre X 130 acres = 260 pints or 32.5 gallons of MONITOR 4. And, you need: 15 gallons per hour X 20 hours = 300 gallons of emulsion, minus 32.5 gallons of MONITOR 4 = 267.5 gallons of water.

**Cleaning the Chemical Injection System:** In order to accurately apply pesticides, the chemical injection system must be kept clean; free of chemical or fertilizer residues and sediments. Refer to your owners manual or ask your equipment supplier for the cleaning procedure for your injection system.

**Flushing the Irrigation System:** At the end of the application period, allow time for all lines to flush the pesticide through all nozzles or emitters before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

**Monitor 4 Liquid Insecticide**

**SPRINKLER IRRIGATION SYSTEMS**

All directions and requirements listed under the GENERAL DIRECTIONS AND REQUIREMENTS FOR ALL RECOMMENDED TYPES OF IRRIGATION SYSTEMS section of this label must be followed for sprinkler irrigation systems.

In addition, the following directions apply to sprinkler irrigation systems.

Do not apply when wind speed favors drift beyond the area intended for treatment.

It is recommended that nozzles in the immediate area of

control panels, chemical supply tanks, pumps and system safety devices be plugged to prevent chemical contamination of these areas.

**Center-Pivot and Automatic-Move Linear Systems:**

Inject the specified dosage per acre continuously for at least one complete revolution of the system. DO NOT USE END GUNS. The system should be run at maximum speed.

**Solid Set and Manually Controlled Linear Systems:**

Injection should be during the last 30 to 60 minutes of a regular irrigation period or as a separate 30 to 60 minute application not associated with a regular irrigation. DO NOT USE END GUNS.

| RECOMMENDED APPLICATIONS |   |                          |   |
|--------------------------|---|--------------------------|---|
| CROP                     | INSECT  | DOSAGE - Pints MONITOR 4 | REMARKS   |
| Cotton                   | Aphids<br>Thrips (Early season)   | 1/5 to 2/5               | Apply specified dosage per acre as needed up to 50 days before harvest and before bolls open. A second application may be needed for heavy infestations of whiteflies, fleahoppers and when low rates are used for aphids and thrips.   |
|                          | Fleahoppers   | 2/5                      |   |
|                          | Whiteflies<br>(except Sweet potato whitefly)  | 1/2 to 1                 | For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.<br><br>Do not feed gin trash to livestock or allow animals to graze on treated areas.  |
|                          | Western flower thrips   | 3/5 to 2                 |   |
|                          | Beet armyworms<br>Cabbage looper<br>Lygus<br>Mites  | 1 to 2                   |   |
|                          | Aphids<br>Thrips (Mid to late season)   |                          |   |
|                          | Stink bugs  |                          |   |
| Potatoes                 | Aphids (Except melon aphid)<br>Potato tuberworm<br>Cabbage looper<br>Colorado potato beetle (except New York)<br>Flea beetles<br>Potato leafhopper<br>Potato psyllid<br>Cutworms (Foliage feeding) (Except California)<br>Armyworms (Except California)<br>European corn borer (Except California)<br>Lygus bug (Except California) | 1-1/2 to 2               | Apply specified dosage (0.75 to 1.0 pound active) per acre. Maximum application of 8 pints per acre per season. Apply in a 7- to 10-day preventive program or as necessary. Do not apply later than 14 days before harvest.<br><br>For application by irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.<br><br>Resistance to Colorado potato beetle has occurred in some areas of New York. Consult your local extension service for details. |

**REQUIREMENTS FOR REDUCING SPRAY DRIFT**

Do not apply under conditions where possible drift to unprotected persons or to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption can occur.

1. For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or rotor diameter.

2. Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

3. For aerial applications, spray should be released at the lowest height consistent with efficacy and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

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- 4. Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph."
- 5. Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.
- 6. Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the

likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperature.

- 7. Do not apply within 150 feet by air or 100 feet by ground of an unprotected person(s) or occupied dwelling.
- 8. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.

**To address Integrated Pest Management Issues:** Local integrated management systems are available for controlling the pests on this label. Such systems include the use of biological control agents, alternative chemicals and scouting. Consult your local Extension specialist or other consultant for further details.

### STORAGE AND DISPOSAL

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

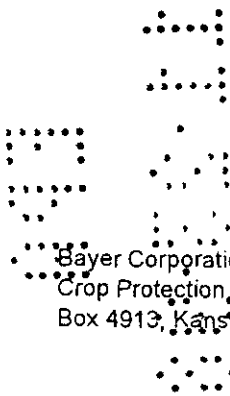
**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking invert to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides above below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone No. is 800-414-0244, or contact Chemtrec at 800-424-9300.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal: Non-refillable Metal - Triple rinse (or equivalent).** Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.  
**Non-refillable Plastic - Triple rinse (or equivalent).** Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.  
**Returnable Refillable Sealed Container:** Do not rinse container. Do not break seals. Replace the dust cover cap and return container intact to point of purchase.

MONITOR is a Reg. TM of Valent U.S.A. Corporation.



Bayer Corporation  
Crop Protection Products  
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