

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT INFORMATION

Product name : GRAMOXONE AWT
Design Code : A3879BU
Use : Herbicide
Company : Syngenta Crop Protection AG
 Postfach
 CH-4002 Basel
 Switzerland
Telephone : +41 61 323 11 11
Telefax : +41 61 323 12 12
Emergency telephone number : +44 1484 538444



Very toxic



Dangerous for the environment

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrase(s)	Concentration
paraquat dichloride	1910-42-5		T+, N	R24/25 R26 R36/37/38 R48/25 R50/53	24 % W/W
paraquat emetic (PP796)	27277-00-5	248-383-5	T	R25	0 - 1 % W/W
pyridine, alkyl derives	68391-11-7	269-929-9	Xn	R10 R21/22	0 - 1 % W/W
butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	209-406-4	Xi	R36/38	0 - 5 % W/W
benzenesulfonic acid, dodecyl-, sodium salt	85117-50-6	285-600-2	Xi	R38 R41	0 - 5 % W/W
amines, tallow alkyl, ethoxylated	61791-26-2		Xn, N	R22 R38 R41 R50/53	0 - 5 % W/W

For the full text of the R phrases mentioned in this Section, see Section 16.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

3. Hazards identification

Very toxic by inhalation.
Harmful in contact with skin and if swallowed.
Irritating to respiratory system.
Toxic: danger of serious damage to health by prolonged exposure if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

- General advice** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation** : Remove to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or Poison Control Center immediately.
- Skin contact** : Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required.
- Ingestion** : **SPEED IS ESSENTIAL.**
Immediate medical attention is required.
If available, give an adsorbent such as activated charcoal, bentonite or Fullers Earth.
- Symptoms** : inflammation of the mouth, throat and oesophagus
Gastrointestinal discomfort
diarrhoea
- Medical advice** : Refer to the booklet 'Paraquat Poisoning. A Practical Guide to Diagnosis, First Aid and Hospital Treatment' (www.syngenta.com/pqmedguide/).
Administer either activated charcoal (100g for adults or 2g/kgbody weight in children) or Fuller's Earth (15% solution; 1 litre for adults or 15ml/kg body weight in children).
NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit.
Do not use supplemental oxygen.
Eye splashes from concentrated material should be treated by an eye specialist after initial treatment.
With the possibility of late onset corneal ulceration it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
alcohol-resistant foam
water spray
- Extinguishing media which must not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for fire-fighters** : In the event of fire, wear self-contained breathing apparatus.
- Further information** : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up** : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- Additional advice** : If the product contaminates rivers and lakes or drains inform respective authorities.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

7. HANDLING AND STORAGE**HANDLING**

Advice on safe handling : Avoid contact with skin and eyes.
When using, do not eat, drink or smoke.
For personal protection see section 8.
Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.

STORAGE

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of the reach of children.
Keep away from food, drink and animal feed.

Other data : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value type	Source
paraquat emetic (PP796)	0.02 mg/m ³	8 h TWA	SYNGENTA
pyridine, alkyl derives	5 mg/m ³	8 h TWA	SYNGENTA
paraquat dichloride	0.5 mg/m ³ 0.08 mg/m ³	Total dust respirable dust	8 h TWA UK HSE

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne mists or vapors are generated, use local exhaust ventilation controls.

Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.

Seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

- Protective measures** : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.
- Respiratory protection** : A particulate filter respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection** : Chemical resistant gloves are not usually required. Select gloves based on the physical job requirements.
- Eye protection** : Eye protection is not usually required. Follow any site specific eye protection policies. Eye/face protection should be certified to EN 166.
- Skin and body protection** : No special protective equipment required. Select skin and body protection based on the physical job requirements.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid
Colour	: green to dark green
pH	: 5 - 9 at 1 % w/v
Flash point	: > 100 °C at 753 mmHg
Oxidizing properties	: not oxidizing
Explosive properties	: Not explosive
Density	: 1.14 g/cm ³ at 20 °C
Viscosity, dynamic	: 139 - 279 mPa.s at 20 °C : 77.4 - 138 mPa.s at 40 °C

10. STABILITY AND REACTIVITY

Materials to avoid	: aluminium mild steel Iron
Hazardous decomposition products	: Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous reactions	: Corrosive in contact with metals

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: Median lethal dose female Rat, 550 mg/kg
Acute inhalation toxicity	: Rat, Irritating to respiratory system.
Acute dermal toxicity	: Median lethal dose male Rat, 805 mg/kg : Median lethal dose female Rat, 1,231 mg/kg
Skin irritation	: Rabbit: No skin irritation
Eye irritation	: Rabbit: Moderate eye irritation
Sensitization	: Buehler Test Guinea Pig Did not cause sensitization on laboratory animals.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

Long term toxicity

Did not show mutagenic effects in animal experiments.
 Did not show carcinogenic effects in animal experiments.
 Did not show reproductive toxicity effects in animal experiments.
 Did not show teratogenic effects in animal experiments.

Ocular effects (cataracts) have been reported following long term oral exposure of laboratory animals., This is not considered to be a risk to man when handled and used as directed on the label., This information refers to Paraquat dichloride

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation : Paraquat does not bioaccumulate.

Mobility : Paraquat is immobile in soil and will not leach.

ECOTOXICITY EFFECTS

Toxicity to fish : LC50 *Oncorhynchus mykiss* (Rainbow trout), 8.3 mg/l , 96 h
 Based on test results obtained with similar product.

Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (water flea), 6 mg/l , 48 h
 Based on test results obtained with similar product.

Toxicity to algae : EBC50 *Pseudokirchneriella subcapitata* (green algae), 0.11 mg/l , 72 h

Based on test results obtained with similar product.

: ERC50 *Pseudokirchneriella subcapitata* (green algae), 0.34 mg/l , 72 h

Based on test results obtained with similar product.

13. DISPOSAL CONSIDERATIONS

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
 Do not dispose of waste into sewer.
 Where possible recycling is preferred to disposal or incineration.
 If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

Triple rinse containers.
Empty containers should be taken for local recycling or waste disposal.
Do not re-use empty containers.

14. TRANSPORT INFORMATION**Land transport***ADR/ RID:*

UN-No: 2922
Class: 8
Danger Label Number : 8, 6.1
Packaging group III
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.
(PARAQUAT DICHLORIDE)

Sea transport*IMDG:*

UN-No: 2922
Class: 8
Danger Label Number : 8, 6.1
Subsidiary Class: 6.1
Packaging group: III
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.
(PARAQUAT DICHLORIDE)

Air transport*IATA-DGR*

UN-No: 2922
Class: 8
Danger Label Number : 8, 6.1
Subsidiary Class: 6.1
Packaging group: III
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.
(PARAQUAT DICHLORIDE)

GRAMOXONE AWT

Version 3

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15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazardous components which must be listed on the label:

- paraquat dichloride

Symbol(s)	: T+ N	Very toxic Dangerous for the environment
R-phrase(s)	: R21/22 R26 R37 R48/25 R50/53	Harmful in contact with skin and if swallowed. Very toxic by inhalation. Irritating to respiratory system. Toxic: danger of serious damage to health by prolonged exposure if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S 2 S13 S20/21 S35 S36/37 S45 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Use appropriate container to avoid environmental contamination.
Exceptional labelling of special preparations	: To avoid risks to man and the environment, comply with the instructions for use.	
Note	: The preparation is classified as dangerous in accordance with Directive 1999/45/EC.	

GRAMOXONE AWT

Version 3

Revision Date 12.04.2005

Print Date 12.04.2005

16. OTHER INFORMATION**Further information**

Text of R phrases mentioned in Section 2:

R10	Flammable.
R21/22	Harmful in contact with skin and if swallowed.
R22	Harmful if swallowed.
R24/25	Toxic in contact with skin and if swallowed.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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