



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## MSDS FOR GLUFOSINATE AMMONIUM 150G/L SL

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product name: Glufosinate ammonium 150g/L SL**

Class: herbicide

CAS No : 77182-82-2

Use : Agriculture

### Company Identification

Willowood Ltd, 17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan ,Hong Kong

Tel No : 00582-25713011

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	HAZARD SIGN	RANGE (%)	CONCENTRATION (%)
Glufosinate ammonium	77182-82-2	R22	15.00% (Min)	15.00
Alkylethersulfate, sodium salt	68891-38-3	R38, R41	50.00 - 70.00	70.00
1-Methoxy-2-propanol	107-98-2	R10	5.00 - 20.00	15.00

### SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview

Warning! Harmful if swallowed or absorbed through skin. Causes eye irritation. May cause skin irritation. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist.

Exposure routes Skin Absorption, Ingestion, Inhalation, Eye contact

Immediate Effects

Eye Causes eye irritation. Do not get in eyes.

Skin Harmful or fatal if absorbed through the skin. May cause skin irritation. Do not get on skin or clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Avoid breathing spray mist.

Chronic or Delayed

Long-Term

This product or its components may have target organ effects. This product or its

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

components may have long term (chronic) health effects  
Potential Environmental Effect  
Toxic to aquatic organisms. This product may cause adverse effects on non-target plants

## SECTION 4. FIRST AID MEASURES

**General** When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Eye** 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.

**Skin** Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes.

**Ingestion** Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

**Inhalation** Move to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to physician

### Signs and Symptoms

If large amounts are ingested, the following symptoms may occur:

Hyperthermia ,Dyspnoea ,Bradycardia ,Ataxia ,Diarrhoea ,Convulsions

Liver and kidney injuries may occur.

Respiratory failure

**Hazards** Ingestion may cause liver damage. Dangerous amounts can be absorbed through the skin. More severe effects if alcohol is consumed. Risk of bronchopneumonia in case of prolonged exposure. Poisoning affects the central nervous system

### Notes to physician

#### Symptoms

Vomiting, Diarrhoea, Abdominal pain, Tremors, Hypotension, muscular weakness, Unconsciousness, Coma, Convulsions, Respiratory failure, Nausea, Tachycardia

#### Symptoms

Symptoms may be delayed.

#### Treatment

Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.

Forced alkaline diuresis and hemodialysis may be considered.

There is no specific antidote.

In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.

If not effective, phenobarbital may be used.

Contraindication: atropine. Oxygen or artificial respiration if needed.

Keep respiratory tract clear.

ECG - monitoring (Electrocardiogram).

EEG - monitoring (Electroencephalogram).

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Monitor: respiratory, cardiac and central nervous system.  
Keep under medical supervision for at least 48 hours.

## SECTION 5. FIRE FIGHTING MEASURES

Flash point 57 °C / 135 °F

The product does not sustain combustion.

Autoignition temperature 455 °C / 851 °F

Suitable extinguishing media

Water spray, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

Unsuitable extinguishing media :High volume water jet

Fire Fighting Instructions

Keep out of smoke. Fight fire from upwind position. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact vegetation.

## SECTION 7. HANDLING AND STORAGE

Handling procedures Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Storing Procedures Keep away from direct sunlight. Protect from freezing.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic

Procedures

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection Follow all label instructions. Train employees in safe use of the product. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar, Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

PPE separately from other laundry.  
Eye/Face Protection Safety glasses, in case of increased risk, also a face shield  
Hand protection Chemical resistant nitrile rubber gloves  
Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.  
Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.  
Exposure Limits  
Glufosinate ammonium 77182-82-2 OES BCS\* TWA 0.9 mg/m<sup>3</sup>

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance-Liquid blue to blue green  
Physical State- liquid  
Odor -aromatic  
Color: blue to blue-green

## SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid Extremes of temperature and direct sunlight.  
Incompatibility Strong oxidizing agents , Acids ,Bases  
Hazardous Decomposition Products Thermal decomposition Ammonia  
Hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.  
Chemical Stability Stable under recommended storage conditions.

## SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, glufosinate ammonium.  
Acute oral toxicity male rat: LD50: >2000 mg/kg  
Acute dermal toxicity male rat: LD50:>2000 mg/kg  
Acute inhalation toxicity male rat: LC50: > 2.97 mg/l Exposure time: 4 h  
Skin irritation rabbit: Mild skin irritation.  
Eye irritation rabbit: Corrosive - Mild skin irritation.  
Sensitisation guinea pig: Non-sensitizing.

## SECTION 12. ECOLOGICAL INFORMATION

Environmental precautions  
Do not allow to get into surface water, drains and ground water. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## SECTION 13. DISPOSAL CONSIDERATIONS

### General Disposal Guidance

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Dispose of contents/container in accordance with local regulation.

Container Disposal Do not re-use empty containers. Follow advice on product label and/or leaflet.

## SECTION 14. TRANSPORT INFORMATION

### TDG

#### Labels 6.1

Packaging group III

Description of the goods PESTICIDE, LIQUID, TOXIC, N.O.S.  
(GLUFOSINATE-AMMONIUM)

#### 49CFR

#### Class 6.1

Packaging group III

Description of the goods PESTICIDES, LIQUID, TOXIC, N.O.S.  
(GLUFOSINATE-AMMONIUM)

### IMDG

#### Class 6.1

Packaging group III

Marine pollutant NO

Description of the goods PESTICIDE, LIQUID, TOXIC, N.O.S.  
(GLUFOSINATE-AMMONIUM SOLUTION)

### IATA

#### Class 6.1

Packaging group III

Environm. Hazardous Mark NO

Description of the goods PESTICIDE, LIQUID, TOXIC, N.O.S.  
(GLUFOSINATE-AMMONIUM SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

## SECTION 15. REGULATORY INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 2 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 2 Physical Hazard - 1 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## SECTION 16. OTHER INFORMATION

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

## MSDS OF THE ACTIVE INGREDIENT

**PRODUCT NAME: GLUFOSINATE-AMMONIUM 95% TECHNICAL**

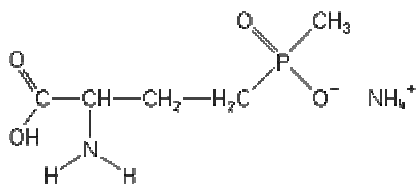
### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Common Name: Glufosinate-ammonium

Chemical Name: ammonium-DL-homoalanin-4-yl(methyl)phosphinate

CAS No.:77182-82-2

Empirical formula:



### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Glufosinate-ammonium	77182-82-2/278-636-5	Xn	R22	>= 95,00

### SECTION 3. HAZARDS IDENTIFICATION

Harmful if swallowed.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

**ACUTE EFFECTS:** Glufosinate is relatively non-toxic to birds, bees, earthworms and beneficial insects. It is slightly toxic to fresh water fish and aquatic invertebrates and slight to moderately toxic to marine organism.

**CHRONIC EFFECTS:**Produced an adaptive increase in kidney weight in several animal species. There were no observable change in kidney function as a result of these weight changes. No change in tumor incidence after lifetime exposure in rats and mice.

## SECTION 4. FIRST AID MEASURES

General information

**Ingestion:**If swallowed, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**Eyes:**Flush with plenty of water. Get medical attention if irritation persists.

**Skin:**Remove contaminated clothing. Wash skin immediately with plenty of soap and water. Get medical attention if irritation occurs.

**Inhalation:**Remove individual to fresh air. Get medical attention if breathing difficulty develops.

## SECTION 5. FIRE FIGHTING MEASURES

Flash point:not established

Suitable extinguishing media:

Small fire: Dry chemical, CO<sub>2</sub>, or water spray.

Large fire: Foam or water---move containers from fire area if without risk. Cool containers with water from maximum distance.

Fire fighting instructions:Keep upwind. Isolate hazard area. Avoid inhalationof smoke and fumes. Use water or foam to reduce fumes.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**SPILL PROCEDURE:** Wear safety goggles and gloves. Soak up spill with rags, paper towels, sponge; place in a bag and hold for waste disposal. Ventilate area and wash spill-site with soap and water.

**Land spill or leak:**Do not touch spilled material. Take up with sand, earth, or other noncombustible absorbent material or dike for laterdisposal. Avoid flame or sparks. Please refer to Section 13 for proper waste disposal procedure.

## SECTION 7. HANDLING AND STORAGE

Handling Appropriate technical measure:

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

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

Specific safe handling advice: 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.

Precautions: May be fatal if absorbed through the skin. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Storage precautions: Do not use or store near heat or open flame. Do not contaminate water, food, or feed by storage or disposal.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Handle only in ventilated area.

Eye/face protection: Goggles or face shield.

Skin protection: Impermeable rubber gloves (such as neoprene or PVC).

Respiratory protection: In case of spill, leak, or emergency, use approved chemical cartridge-type respirator.

Other/general protection: Hat, impermeable pants and shirts, and waterproof boots

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White or yellowish-white solid

Odor: slightly pungent odour.

Vapor pressure: <0.1 mPa (20 °C)

S.g./density: 1.4 (20 °C)

Melting point: 215 °C

Solubility: 1370g/L in water. In acetone 0.16, ethanol 0.65, ethyl acetate 0.14, toluene 0.14, hexane 0.2 (all in g/l, 20 °C)

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA







# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## SECTION 10. STABILITY AND REACTIVITY

Stability:Stable to light, and at least 2 years in unsealed package under normal storage condition.

Conditions to avoid:Avoid extreme heat.

Compatibility:Compatible with diuron, simazine, MCPA, and some other herbicides.

## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Studies

Oral LD50 (rat):3160 mg/kg for female rat; 2150mg/kg for male rat (slightly toxic).

Dermal LD50 (rat):> 2000 mg/kg (slightly toxic).

Skin irritation(rat):no skin irritating.

Eye irritation (rabbit):no eye irritation.

Sensitization:slight sensitization.

## SECTION 12. ECOLOGICAL INFORMATION

Birds:Dietary LC50 (8 d) for Japanese quail >5000 mg/kg.

Fish:LC50 (96 h) for rainbow trout 710, carp, bluegill sunfish, golden orfe >1000 mg/l.

Daphnia:LC50 (48 h) 560-1000 mg/l.

Algae:LD50 for Scenedesmus subspicatus >1000, Selenastrum capricornutum 37 mg/l.

Bees:Not hazardous to bees; LD50 >100µg/bee.

Worms:LD50 for earthworms >1000 mg/kg soil.

Other beneficial spp.:Not toxic to beneficial arthropods.

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal:Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container disposal:Empty containers should be triple rinsed (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by Authorities, by burning. If burned, stay out of smoke.

## SECTION 14. TRANSPORT INFORMATION

ADNRNot dangerous goods      ADRNot dangerous goods

GGVE Not dangerous goods      GGVS Not dangerous goods

IATA\_CNot dangerous goods      IATA\_P Not dangerous goods

IMDGNot dangerous goods      RIDNot dangerous goods

## SECTION 15. REGULATORY INFORMATION

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

The product is classified and labeled in accordance with the EC Directive on dangerous substances EC-Directive 67/548, as amended.

Classification:

Hazard warning labeling compulsory

Symbol(s)

Xn Harmful

R-phrases(s)

R22 Harmful if swallowed.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.

## SECTION 16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

## MATERIAL SAFETY DATA SHEETS –FOR INERST USED IN THE FORMULATED PRODUCTS

### ALKYLETHER SULFATE SODIUM SALT MSDS

Section 1 - Product Information

Synonyms: Product Has No Synonyms

Primary product use: Pearllising agent for cosmetics

Chemical family: A mixture of a sodium fatty alcohol ether sulphates salt and pearlescent agent.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## Section 2 - Composition information on hazardous ingredients

Hazardous ingredients:

Component	CAS-no.	Concentration
Alkylethersulfate, sodium salt	68891-38-3	70%

## Section 3 - Hazards identification

Emergency overview: White liquid

Eye irritant.

Skin irritant.

Expected Route of entry:

Inhalation: Vapors and/or mists are probably irritating to respiratory passages, nose, and throat.

Skin contact: May cause skin irritation. Not expected to be toxic by skin absorption.

Eye contact: May cause severe irritation.

Ingestion: Not expected to be toxic.

## Section 4 - First aid measures

After inhalation: Get victim to fresh air. Give artificial respiration or oxygen if breathing has stopped. Get prompt medical attention. Do not give fluids if victim is unconscious.

After contact with skin: Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

After contact with eyes: Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.

After ingestion: If ingested, seek medical assistance immediately.

Advice to doctor / Treatment: None known.

## Section 5 - Fire fighting measures

Flashpoint: > 212 °F

Lower explosion limit: not tested.

Upper explosion limit: not tested.

Self ignition: Not applicable

Ignition temperature: not tested.

Hazardous combustion products:

In case of fires, hazardous combustion gases are formed:

Sulphur dioxide (SO<sub>2</sub>)

Extinguishing media: water spray jet

alcohol-resistant foam

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

carbon dioxide dry powder

Special fire fighting procedure: Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

Unusual fire and explosion hazards:

Emits toxic and corrosive fumes under fire conditions.

## Section 6 - Accidental release measures

Steps to be taken in case of spill or leak:

Contain spill. Ensure adequate ventilation and wear appropriate personal protective equipment. Collect onto inert absorbent. Place in sealable container. Do not allow to contaminate water sources or sewers.

## Section 7 - Handling and storage

Advice on safe handling: Sensitive to frost: If product becomes opaque, thickening, or frozen it can be slowly thawed at room temperature and ready for use after a short stirring time. Avoid skin and eye contact.

Further info on storage conditions:

Store in original container.

Keep containers closed.

## Section 8 - Exposure controls / personal protection

Respiratory protection: If airborne concentrations pose a health hazard, become irritating or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134

Hand protection: Butyl Rubber, PVC Or Neoprene.

Eye protection: Chemical splash goggles and full face shield.

Other protective equipment: Protective clothing to minimize skin contact should be worn.

Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.

Advice on system design: Local ventilation recommended - mechanical ventilation may be used.

## Section 9 - Physical and chemical properties

Form:Liquid

Color:white

Odor:slight original odour

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

pH: 4 - 5 (20 °C, 10 g/l)

Solubility in water: (20 °C) insoluble

## Section 10 - Stability and reactivity

Thermal decomposition: No decomposition up to 260 °C.

Chemical stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to avoid: None known.

Conditions to avoid: None known.

## Section 11 - Toxicological information

Product information:

Acute oral toxicity: LD50 > 2,000 mg/kg (rat)

Acute inhalation toxicity: not tested.

Acute dermal toxicity: not tested.

Skin irritation: Moderate irritant (rabbit)

Eye irritation: Severe irritant (rabbit)

Sensitization: non-sensitizing

The product has not been tested. The information is derived from the properties of the individual components.

## Section 12 - Ecological information

Product information:

Biodegradation: > 80 %

Fish toxicity: LC50 10 - 100 mg/l (96 h, zebra fish)

Method: OECD 203

Bacteria toxicity: EC50 > 1,000 mg/l

Method: OECD 209

Chemical oxygen demand (COD):790 mg/g

## Section 13 - Disposal considerations

Waste disposal information:

Recommended disposal is by incineration in approved facilities.

RCRA hazardous waste:

No -- Not as sold.

RCRA number: NONE

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## Section 14 - Transport information

DOT not restricted  
IATA not restricted  
IMDG not restricted

## Section 15 - Regulatory information

HMIS:

Health: 2 Flammability: 1 Reactivity: 0 Personal protection: D

## Section 16 - Other information

The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof.

## 1- Methoxy-2-propanol MSDS

Section 1: Chemical Product and Company Identification

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar, Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY



# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Product Name: Propylene glycol monomethyl ether

Chemical Name: 1-Methoxy-2-propanol

Chemical Formula: CH<sub>3</sub>OCH<sub>2</sub>CH(OH)CH<sub>3</sub>

## Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Propylene glycol monomethyl ether	107-98-2	100

Toxicological Data on Ingredients: Propylene glycol monomethyl ether:

ORAL (LD50): Acute: 5660 mg/kg [Rat.].

DERMAL (LD50): Acute: 13000 mg/kg [Rabbit.].

## Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

## Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

Seek medical attention.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

## Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 137°C (278.6°F)

Flash Points: CLOSED CUP: 36°C (96.8°F).

Flammable Limits: LOWER: 3% UPPER: 12%

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards:

Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Not available.

## Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA







# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

## Large Spill:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents.

### Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) [1995] TWA: 369 STEL: 553 (mg/m<sup>3</sup>) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Liquid.)

Odor: Not available.

Taste: Not available.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Molecular Weight:90.12 g/mole

Color:Colorless.

pH (1% soln/water):7 [Neutral.]

Boiling Point:120.1°C (248.2°F)

Melting Point:-95°C (-139°F)

Critical Temperature:Not available.

Specific Gravity:0.92 (Water = 1)

Vapor Pressure:12.5 mm of Hg (@ 20°C)

Vapor Density:3.12 (Air = 1)

Volatility:Not available.

Odor Threshold:Not available.

Water/Oil Dist. Coeff.:Not available.

Ionicity (in Water):Not available.

Dispersion Properties:See solubility in water, methanol, diethyl ether.

Solubility:Soluble in cold water, hot water, methanol, diethyl ether.

## Section 10: Stability and Reactivity Data

Stability:The product is stable.

Instability Temperature:Not available.

Conditions of Instability:Not available.

Incompatibility with various substances:Reactive with oxidizing agents.

Corrosivity:Non-corrosive in presence of glass.

Special Remarks on Reactivity:Air sensitive.

Special Remarks on Corrosivity:Not available.

Polymerization:No.

## Section 11: Toxicological Information

Routes of Entry:Eye contact.

Toxicity to Animals:

Acute oral toxicity (LD50): 5660 mg/kg [Rat.]. Acute dermal toxicity (LD50): 13000 mg/kg [Rabbit.].

Chronic Effects on Humans:Not available.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:Not available.

Special Remarks on Chronic Effects on Humans:Exposure can cause coughing, chest pains, difficulty in breathing.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Special Remarks on other Toxic Effects on Humans:Material is irritating to mucous membranes and upper respiratory Tract.

## Section 12: Ecological Information

Ecotoxicity:Not available.

BOD5 and COD:Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation:Not available.

## Section 13: Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification

## Section 14: Transport Information

DOT Classification:Class 3: Flammable liquid.

Identification:: 1-Methoxy-2-propanol : UN3092 PG: III

Special Provisions for Transport:Not available.

## Section 15: Other Regulatory Information

Other Classifications:

WHMIS (Canada):CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

DSCL (EEC):

R10- Flammable. R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard:0

Fire Hazard:3

Reactivity:0

Personal Protection:j

National Fire Protection Association (U.S.A.):

Health:0

Flammability:3

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA





# WILLOWOOD LIMITED

17/ F, Seaview Plaza, No. 283 Shau Kei Wan Road, Shau Kei Wan  
Hong Kong. Tel: 2571-3011, Fax: 2571-3410 Email:sales@willowoodhk.com  
COMPANY WEBSITE: WWW.WILLOWOODHK.COM

ISO 9001:2008

Reactivity:0

Specific hazard:

Protective Equipment:Gloves. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

WILLOWOOD GROUP OFFICES WORLD-WIDE

USA

HONG KONG

INDIA

AFRICA

CHINA

CENTRAL AMERICA



MANUFACTURING FACILITY: SHREEJI PESTICIDES LTD, Block 69/P, Village-Manjusar,Tal.Savli, Dist. Vadodara-Gujarat, INDIA  
ISO 9001: 2008 / ISO 14001: 2004 / BS OHSAS-18001: 2007 CERTIFIED MANUFACTURING FACILITY