



## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT CODE** A0006  
**PRODUCT NAME** AMBROXAN  
**SUPPLIER** Shanghai M & U International Trade Co., Ltd.  
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200333 Shanghai, China  
+86-21-32515501 32515502  
sales@mu-intel.com

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

### 2. HAZARD IDENTIFICATION:

**Physical hazards**

Not classified.

**Health hazards**

Acute toxicity, oral Category 5

**Environmental hazards**

Not classified.

**Label elements**

**Hazard symbol**

None.

**Signal word**

Warning

**Hazard statement**

H303 May be harmful if swallowed.

**Precautionary statement**

**Prevention**

Observe good industrial hygiene practices.

**Response**

P312 Call a POISON CENTER/doctor if you feel unwell.

**Storage**

Store away from incompatible materials.

### Disposal

Dispose of waste and residues in accordance with local authority requirements.

### Hazard(s) not otherwise classified (HNOC)

WARNING! May form combustible dust concentrations in air. Avoid breathing dust.

### Supplemental information

None.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS:

### Substances

Chemical name	Common name and synonyms	CAS number	%
(3aR,5aS,9aS,9bR)-3a,6,6,9a-tetra methyl-2,4,5,5a,7,8,9,9b-octahydro-1H benzo[e][1]benzofuran	8 alpha-12-oxi do-13,14,15,16-tetranorlabdane 1,5,5,9- tetramethyl-13-oxatricyclo [8.3.0.04,9] tridecane naphtho [2,1-b]furan, dodecahydro-3a,6,6,9a-tetramethyl-, (3aR,5aS,9aS,9bR)-	6790-58-5	100

## 4. FIRST-AID GUIDE:

### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

### Skin contact

Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

### Eye contact

Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

### Ingestion

Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

### Most important symptoms/effects, acute and delayed

Dusts may irritate the respiratory tract, skin and eyes.

### Indication of immediate medical attention and special treatment needed

Not available.

### **General information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## **5. FIRE-FIGHTING GUIDE:**

### **Suitable extinguishing media**

Water spray, fog, CO<sub>2</sub>, dry chemical, or alcohol resistant foam.

### **Unsuitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

### **Specific hazards arising from the chemical**

Fire may produce irritating, corrosive and/or toxic gases.

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### **Special protective equipment and precautions for firefighters**

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighter's protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires.

### **Firefighting equipment/instructions**

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

### **Specific methods**

Use water spray to cool unopened containers.

### **General fire hazards**

Static charges generated by emptying package in or near flammable vapor may cause flash fire.

## **6. ACCIDENTAL RELEASE GUIDE:**

### **Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

### **Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Sweep up and place in a clearly labeled container for chemical waste. Wash contaminated area with water. Use only non-sparking tools. Avoid the generation of dusts during clean-up.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment.

## **7. HANDLING AND STORAGE:**

### **Precautions for safe handling**

Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges when there is a risk of dust explosion. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Assume that this material is capable of producing a dust explosion if ignited as a dust cloud.

### **Conditions for safe storage, including any incompatibilities**

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

## **8. EXPOSURE AND PERSONAL PROTECTION:**

### **Occupational exposure limits**

No exposure limits noted for ingredient(s).

### **Biological limit values**

No biological exposure limits noted for the ingredient(s).

### **Appropriate engineering controls**

Use only appropriately classified electrical equipment and powered industrial trucks. Use explosion-proof ventilation equipment to stay below exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust

collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**

Chemical resistant gloves.

**Other**

Not available.

**Respiratory protection**

Dust mask.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

<b>Appearance</b>	Refer to Spec Sheet
<b>Physical state</b>	Powder\Crystal.
<b>Form</b>	Powder. Crystalline powder.
<b>Color</b>	Refer to Spec Sheet
<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	163.4 °F (73 °C)
<b>Initial boiling point and boiling range</b>	248 °F (120 °C) at 1.4 mmHg
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%)</b>	Not available.
<b>Flammability limit – upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	> 0 mm Hg at 20°C

<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water) I</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Molecular formula</b>	C16H28O
<b>Molecular weight</b>	236.4 g/mol

## 10. STABILITY AND REACTIVITY:

### Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

### Chemical stability

Material is stable under normal conditions.

### Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### Conditions to avoid

Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Minimize dust generation and accumulation. Contact with incompatible materials.

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

No hazardous decomposition products if stored and handled as indicated.

## 11. TOXICOLOGICAL INFORMATION:

### Information on likely routes of exposure

#### Inhalation

Irritating to respiratory system.

#### Skin contact

Dust or powder may irritate the skin.

#### Eye contact

Dust may irritate the eyes.

#### Ingestion

May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

Dusts may irritate the respiratory tract, skin and eyes.

**Information on toxicological effects**

**Acute toxicity**

May be harmful if swallowed.

Product	Species	Test Results
(3aR,5aS,9aS,9bR)-3a,6,6,9a-tetramethyl-2,4,5,5a,7,8,9,9b-octahydro-1H benzo[e][1]benzofuran (CAS 6790-58-5)		
Acute Oral LD50	Rat	> 2000 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**

Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**

Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization**

Not a respiratory sensitizer.

**Skin sensitization**

This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity**

This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

**Aspiration hazard**

Not an aspiration hazard.

**12. ECOLOGICAL INFORMATION:****Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. DISPOSAL RECOMMENDATIONS:****Disposal instructions**

Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

Not established.

**Waste from residues / unused products**

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.



#### **14. TRANSPORTATION INFORMATION:**

**ADN**

Not regulated as dangerous goods.

**ADR**

Not regulated as dangerous goods.

**RID**

Not regulated as dangerous goods.

**DOT**

**BULK**

Not regulated as dangerous goods.

**DOT**

**NON-BULK**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

#### **15. REGULATORY INFORMATION:**

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

No

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

**(SDWA)**

Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. OTHER INFORMATION:

#### HMIS® ratings

Health: 1

Flammability: 1

Physical hazard: 0

The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the SDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.

**Prepared By:** M&U International LLC

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