

**1. PRODUCT AND COMPANY IDENTIFICATION:**

<b>PRODUCT CODE</b>	A0005
<b>PRODUCT NAME</b>	ALLYL ISOTHIOCYANATE
<b>SUPPLIER</b>	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

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

**2. HAZARD IDENTIFICATION:**

**Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed  
Acute Tox. 2 H310 Fatal in contact with skin



GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure



GHS07

Skin Irrit. 2 H315 Causes skin irritation  
Eye Irrit. 2A H319 Causes serious eye irritation  
Skin Sens. 1 H317 May cause an allergic skin reaction  
STOT SE 3 H335 May cause respiratory irritation

**Label elements**

**GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS)

**Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

### Signal word

Danger

### Hazard-determining components of labeling

allyl isothiocyanate

### Hazard statements

Flammable liquid and vapor

Toxic if swallowed

Fatal in contact with skin

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure

### Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

If swallowed: Immediately call a poison center/doctor

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Store locked up

Dispose of contents/container in accordance with local/regional/national/international regulations

### Classification system:

#### NFPA ratings (scale 0 - 4)



Health = 3

Fire = 2

Reactivity = 0

#### HMIS-ratings (scale 0 - 4)



Health = 3

Fire = 2

Reactivity = 0

### Other hazards

#### Results of PBT and vPvB assessment

PBT

Not applicable

**vPvB**

Not applicable

**3. COMPOSITION AND INFORMATION ON INGREDIENTS:**

**Chemical characterization: Substances**

**CAS No. Description**

57-06-7 allyl isothiocyanate

**Identification number(s)**

**EC number**

200-309-2

**4. FIRST-AID GUIDE:**

**Description of first aid measures**

**General information**

Immediately remove any clothing soiled by the product

Remove breathing apparatus only after contaminated clothing have been completely removed

In case of irregular breathing or respiratory arrest provide artificial respiration

**After inhalation**

Supply fresh air or oxygen; call for doctor

In case of unconsciousness place patient stably in side position for transportation

**After skin contact**

Immediately wash with water and soap and rinse thoroughly

**After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor

**After swallowing**

Do not induce vomiting; immediately call for medical help

**Information for doctor**

**Most important symptoms and effects, both acute and delayed**

No further relevant information available

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available

**5. FIRE-FIGHTING GUIDE:**

**Extinguishing media**

**Suitable extinguishing agents**

CO2 or extinguishing powder. Fight larger fires with alcohol resistant foam

**For safety reasons unsuitable extinguishing agents:**

Water with full jet

**Special hazards arising from the substance or mixture**

No further relevant information available

**Advice for firefighters****Protective equipment**

Mouth respiratory protective device

**Additional information**

Cool endangered receptacles with water spray

Collect contaminated fire fighting water separately. It must not enter the sewage system

**6. ACCIDENTAL RELEASE GUIDE:****Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away

**Environmental precautions**

Inform respective authorities in case of seepage into water course or sewage system

Do not allow to enter sewers/ surface or ground water

**Methods and material for containment and cleaning up**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust)

Dispose contaminated material as waste according to item 13

Ensure adequate ventilation

**Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment

See Section 13 for disposal information

**7. HANDLING AND STORAGE:****Handling****Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace

Open and handle receptacle with care

**Information about protection against explosions and fires**

Keep ignition sources away - Do not smoke

Protect against electrostatic charges

Keep respiratory protective device available

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

**Storage**

**Requirements to be met by storerooms and receptacles**

No special requirements

**Information about storage in one common storage facility**

Not required

**Further information about storage conditions**

Keep receptacle tightly sealed

**Specific end use(s)**

No further relevant information available

**8. EXPOSURE AND PERSONAL PROTECTION:**

**Additional information about design of technical systems**

No further data; see item 7

**Control parameters**

**Components with limit values that require monitoring at the workplace**

**57-06-7 allyl isothiocyanate**

WEEL	Short-term value: 1 ppm Skin; DSEN
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**Additional information**

The lists that were valid during the creation were used as a basis

**Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

- Keep away from foodstuffs, beverages and feed
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work
- Store protective clothing separately
- Avoid contact with the eyes and skin

**Breathing equipment**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air

**Protection of hands:**



### Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer

### Penetration time of glove material

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed

### Eye protection



Tightly sealed goggles

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance</b>	
<b>Form</b>	Liquid
<b>Color</b>	Colorless to pale orange
<b>Odor</b>	Mustard
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range</b>	-100 °C (-148 °F)
<b>Boiling point/Boiling range</b>	150 °C (302 °F)
<b>Flash point</b>	46 °C (115 °F)
<b>Ignition temperature</b>	
<b>Decomposition temperature</b>	Not determined
<b>Auto igniting</b>	Not determined
<b>Danger of explosion</b>	Product is not explosive. However, formations of explosive air/ vapor mixtures are possible
<b>Explosion limits</b>	
<b>Lower</b>	Not determined
<b>Upper</b>	Not determined

<b>Vapor pressure at 38 °C (100 °F)</b>	13 hPa (10 mm Hg)
<b>Density at 20 °C (68 °F)</b>	1.02 g/cm <sup>3</sup> (8.512 lbs/gal)
<b>Relative density</b>	Not determined
<b>Vapour density</b>	Not determined
<b>Evaporation rate</b>	Not determined
<b>Solubility in / Miscibility with Water at 20 °C (68 °F)</b>	2 g/l
<b>Partition coefficient (n-octanol/water)</b>	Not determined
<b>Viscosity</b>	
<b>Dynamic</b>	Not determined
<b>Kinematic</b>	Not determined
<b>Organic solvents</b>	0.0 %
<b>Other information</b>	No further relevant information available

## 10. STABILITY AND REACTIVITY:

### Reactivity

#### Chemical stability

#### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications

#### Possibility of hazardous reactions

No dangerous reactions known

#### Conditions to avoid

No further relevant information available

#### Incompatible materials

No further relevant information available

#### Hazardous decomposition products

No dangerous decomposition products known

## 11. TOXICOLOGICAL INFORMATION:

### Information on toxicological effects

#### Acute toxicity

<b>LD/LC50 values that are relevant for classification</b>		
<b>57-06-7 allyl isothiocyanate</b>		
Oral	LD50	112 mg/kg (rat)
Dermal	LD50	88 mg/kg (rabbit)

#### Primary irritant effect

##### On the skin

Irritant to skin and mucous membranes

**On the eye**

Irritating effect

**Sensitization**

Sensitization possible through skin contact

**Additional toxicological information****Carcinogenic categories**

<b>ARC (International Agency for Research on Cancer)</b>		
57-06-7	allyl isothiocyanate	3
<b>NTP (National Toxicology Program)</b>		
Substance is not listed		
<b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
Substance is not listed.		

**12. ECOLOGICAL INFORMATION:****Toxicity****Aquatic toxicity**

No further relevant information available

**Persistence and degradability**

No further relevant information available

**Behavior in environmental systems****Bioaccumulative potential**

No further relevant information available

**Mobility in soil**

No further relevant information available

**Ecotoxicological effects****Remark**

Very toxic for fish

**Additional ecological information****General notes**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system

Danger to drinking water if even small quantities leak into the ground

Also poisonous for fish and plankton in water bodies

Very toxic for aquatic organisms

**Results of PBT and vPvB assessment****PBT**

Not applicable



**vPvB**

Not applicable

**Other adverse effects**

No further relevant information available




**13. DISPOSAL RECOMMENDATIONS:****Waste treatment methods****Recommendation**


Must not be disposed of together with household garbage. Do not allow product to reach sewage system

**Un cleaned packaging****Recommendation**

Disposal must be made according to official regulations

**14. TRANSPORTATION INFORMATION:**

<b>UN-Number</b>	
<b>DOT, ADR, IMDG, IATA</b>	UN1545
<b>UN proper shipping name</b>	
<b>DOT</b>	Allyl isothiocyanate, stabilized
<b>ADR</b>	1545 Allyl isothiocyanate, stabilized
<b>IMDG, IATA</b>	ALLYL ISOTHIOCYANATE, STABILIZED
<b>Transport hazard class (es)</b>	
<b>DOT</b>	
	
<b>Class</b>	6.1 Toxic substances
<b>Label</b>	6.1, 3
<b>ADR</b>	
	
<b>Class</b>	6.1 (TF1) Toxic substances
<b>Label</b>	6.1+3
<b>IMDG</b>	
	
<b>Class</b>	6.1 Toxic substances
<b>Label</b>	6.1/3

<b>IATA</b>	
	
<b>Class</b>	6.1 Toxic substances
<b>Label</b>	6.1 (3)
<b>Packing group</b>	II
<b>DOT, ADR, IMDG, IATA</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Special precautions for user</b>	Warning: Toxic substances
<b>Danger code (Kemler)</b>	639
<b>EMS Number</b>	F-E,S-D
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable
<b>Transport/Additional information</b>	
<b>DOT</b>	
<b>Quantity limitations</b>	On passenger aircraft/rail: Forbidden On cargo aircraft only: 60 L
<b>ADR</b>	
<b>Excepted quantities (EQ)</b>	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
<b>IMDG</b>	
<b>Limited quantities (LQ)</b>	100 ml
<b>Excepted quantities (EQ)</b>	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
<b>UN "Model Regulation"</b>	UN1545, Allyl isothiocyanate, stabilized, 6.1 (3), II

## 15. REGULATORY INFORMATION:

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Sara**

**Section 355 (extremely hazardous substances)**

Substance is not listed

**Section 313 (Specific toxic chemical listings)**

Substance is not listed

**TSCA (Toxic Substances Control Act)**

Substance is listed

**Proposition 65**

**Chemicals known to cause cancer**

Substance is not listed

**Chemicals known to cause reproductive toxicity for females**

Substance is not listed

**Chemicals known to cause reproductive toxicity for males**

Substance is not listed

**Chemicals known to cause developmental toxicity**

Substance is not listed

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

Substance is not listed.

**TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed

**GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS)

**Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

**Signal word**

Danger

**Hazard-determining components of labeling**

allyl isothiocyanate

**Hazard statements**

Flammable liquid and vapor

Toxic if swallowed

Fatal in contact with skin

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If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing

Store locked up

Dispose of contents/container in accordance with local/regional/national/international regulations

**Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out

**16. OTHER INFORMATION:**

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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