

**1. PRODUCT AND COMPANY IDENTIFICATION:**

**PRODUCT CODE** A0005  
**PRODUCT NAME** ALLYL ISOTHIOCYANATE  
**SUPPLIER** M & U International LLC.  
 31 Readington Rd.  
 Branchburg, NJ 08876  
 908-359-9000  
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**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

**2. HAZARD IDENTIFICATION:**

**Classification of the substance or mixture:**

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

Flammable liquids (Category 3)	H226
Acute toxicity, Oral (Category 4)	H302
Acute toxicity, Inhalation (Category 2)	H330
Acute toxicity, Dermal (Category 2)	H310
Skin corrosion (Category 1B)	H314
Serious eye damage (Category 1)	H318
Skin sensitisation (Category 1)	H317
Short-term (acute) aquatic hazard (Category 1)	H400
Long-term (chronic) aquatic hazard (Category 1)	H410

**GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**

Pictogram



Signal word

Danger

**Hazard statements**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H310 + H330	Fatal in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P284 Wear respiratory protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P350 + P310 IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391 Collect spillage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed

P403 + P235  
P405  
P501

Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS – Vesicant, lachrymator.**

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS:

**Chemical characterization: Substances**

**CAS No.:** 57-06-7

**Description:** ALLYL ISOTHIOCYANATE

**Identification number(s)**

**EC No.:** 200-309-2

### 4. FIRST-AID GUIDE:

**Description of first aid measures**

**After inhalation:**

Supply fresh air. In case of unconsciousness place patient stably in side position for transportation. Call a doctor if symptoms develop or persist. Move out of dangerous area.

**After skin contact:**

Wash off with soap and plenty of water. Consult a physician if you feel unwell.

**After eye contact:**

Rinse opened eye for several minutes under running water. Consult a physician if you feel unwell.

**After swallowing:**

If swallowed rinse mouth with water (only if person is conscious). If symptoms persist consult doctor.

**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:**

Dry powder, Dry sand

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

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

**Advice for firefighters**

**Protective equipment:**

Wear self contained breathing apparatus for fire fighting if necessary.

**Additional information**

Use water spray to cool unopened containers.

**6. ACCIDENTAL RELEASE GUIDE:**

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner by wet-brushing and place in container for disposal according to local regulations.

**7. HANDLING AND STORAGE:**

**Handling:**

**Precautions for safe handling**

Use with local exhaust ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge.

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

**Storage:**

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature 2 – 8 °C

**8. EXPOSURE AND PERSONAL PROTECTION:**

## **Control parameters**

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

Contains no substances with occupational exposure limit values.

## **Exposure controls**

### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of work day.

### **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. 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:

Information on basic physical and chemical properties

<b>General Information</b>	
<b>Appearance:</b>	
<b>Form:</b>	Liquid, clear
<b>Color:</b>	Light orange
<b>Odor:</b>	Mustard-like
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	-80 °C (-112 °F) – lit.
<b>Boiling point/Boiling range:</b>	150 °C (302 °F) - lit.
<b>Flash point:</b>	45 °C (113 °F) – closed cup
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Not determined.
<b>Danger of explosion:</b>	Not determined
<b>Explosion limits:</b>	
<b>Lower:</b>	
<b>Upper:</b>	
<b>Vapor pressure:</b>	4.5 hPa at 23 °C (73 °F)
<b>Density at 20 °C (68 °F):</b>	Not determined.
<b>Relative density</b>	1.013 g/cm <sup>3</sup> at 25 °C (77 °F)
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	2,000 g/l at 20 °C (68 °F)
<b>Partition coefficient (n-octanol/water):</b>	log Pow: 1.83 at 20 °C (68 °F)
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Organic solvents:</b>	Not determined.
<b>Other information</b>	No further relevant information available.

## 10. STABILITY AND REACTIVITY:

### Reactivity

Not applicable.

### Chemical stability

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Not applicable.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials:**

Water, Alcohols, Strong bases, Amines, Acids, Strong oxidizing agents

**Hazardous decomposition products:**

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

**11. TOXICOLOGICAL INFORMATION:****Information on toxicological effects****Acute toxicity:**

LD50 Oral - Rat - female - 425.4 mg/kg  
(OPPTS 870.1100)

LC50 Inhalation - Rat - male and female - 4 h - 0.206 - 0.508 mg/l  
(OPPTS 870.1300)

Inhalation: Irritating to respiratory system.

LD50 Dermal - Rat - male and female - 200 - 2,000 mg/kg  
(OPPTS 870.1200)

**Primary irritant effect:****On the skin:**

Skin - Rabbit  
Result: Corrosive  
Remarks: (ECHA)

**On the eye:**

No data available.

**Sensitization:**

Local lymph node assay (LLNA) - Mouse  
Result: Causes sensitization  
(OPPTS 870.2600)

**Germ cell mutagenicity**

No data available.

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

**IARC (International Agency for Research on Cancer)**



Substance is not listed.

**NTP (National Toxicology Program)**

Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

**Specific target organ toxicity - single exposure**

No data available.

**Additional Information**

No data available.

**12. ECOLOGICAL INFORMATION:**

**Toxicity**

**Aquatic toxicity:**

Toxicity to fish LC50 - *Oryzias latipes* (Orange-red killifish) - 0.07 mg/l - 96 h  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates  
Remarks: (ECHA)(Allyl isothiocyanate)

**Persistence and degradability**

Biodegradability aerobic - Exposure time 29 d  
Result: 0 % - Not readily biodegradable.

**Behavior in environmental systems:**

**Bioaccumulative potential**

Not applicable.

**Mobility in soil**

Not applicable.

**Results of PBT and vPvB assessment**

**PBT:**

Not applicable.

**vPvB:**

Not applicable.

**Other adverse effects**

Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. Discharge into the environment must be avoided.



### 13. DISPOSAL RECOMMENDATIONS:

#### Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as an unused product.

### 14. TRANSPORTATION INFORMATION:

<b>DOT (US)</b> <b>NA/UN-Number:</b> <b>Class:</b> <b>Packing group:</b> <b>Proper shipping name:</b> <b>Reportable Quantity:</b> <b>Poison Inhalation Hazard:</b>	1545 6.1 (3) II Allyl isothiocyanate, stabilized  No
<b>IMDG</b> <b>UN-number:</b> <b>Class:</b> <b>Packing group:</b> <b>EMS No.:</b> <b>Proper shipping name:</b> <b>Marine pollutant:</b>	1545 6.1 (3) II F-E, S-D Allyl isothiocyanate, stabilized Yes
<b>IATA</b> <b>UN-number:</b> <b>Class:</b> <b>Packing group:</b> <b>Proper shipping name:</b> <b>IATA passenger:</b>	1545 6.1 (3) II Allyl isothiocyanate, stabilized Not permitted for transport

### 15. REGULATORY INFORMATION:

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

#### Sara

#### Section 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**Section 311/312 (hazardous chemical):**

Acute Health hazard, Fire hazard

**Section 313 Components**

The following components are not subject to reporting levels established by SARA Title III, Section 313.

**TSCA (Toxic Substances Control Act):**

Substance is not 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.

**Massachusetts Right to Know Components**

None.

**Pennsylvania Right to Know Components**

ALLYL ISOTHIOCYANATE

Cas. No.: 57-06-7

**New Jersey Right to Know Components**

ALLYL ISOTHIOCYANATE

Cas. No.: 57-06-7

**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

**REVISED:** 8/8/2023