

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE	A0149
PRODUCT NAME	TRANS-2-HEXENAL
SUPPLIER	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 H311 Toxic in contact with skin.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Label elements

GHS label elements

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

Hazard pictograms



GHS02 GHS06 GHS07

Signal word

Danger

Hazard-determining components of labeling:

trans-hex-2-enal

Hazard statements

Flammable liquid and vapor.

Harmful if swallowed.

Toxic in contact with skin.

May cause an allergic skin reaction.

Precautionary statements

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

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

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

Specific treatment (see on this label).

Store locked up.

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

Additional information:

Labels must be in color

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 3

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

6728-26-3 trans-hex-2-enal

Identification number(s)

EC number:

229-778-1

4. FIRST-AID GUIDE:

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and be sure to call for a 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.

After swallowing:

Immediately call a 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:

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:**

No special measures required.

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.

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**

No special precautions are necessary if used correctly.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

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:**

Not required.

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.
Avoid contact with the eyes and skin.

Breathing equipment:

Not required.

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

General Information	
Appearance:	
Form:	Fluid
Color:	Colorless to pale yellow
Odor:	Strawberry, apple
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	47/23 mbar °C (117/73 mbar °F)
Flash point:	35 °C (95 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	0.846 g/cm ³ (7.06 lbs/gal)
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	0.0 %
Other information	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:**

LD/LC50 values that are relevant for classification:		
6728-26-3 trans-hex-2-enal		
Oral	LD50	780 mg/kg (rat)
Dermal	LD50	600 mg/kg (rabbit)

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

No irritant effect.

On the eye:

No irritating effect.

Sensitization:

Sensitization possible through skin contact.

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.

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:**

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.

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.

Uncleaned packaging:**Recommendation:**

Disposal must be made according to official regulations.

14. TRANSPORTATION INFORMATION:

UN-Number DOT, ADR, IMDG, IATA	UN1988
UN proper shipping name DOT ADR IMDG IATA	Aldehydes, flammable, toxic, n.o.s. (trans-hex-2-enal) 1988 Aldehydes, flammable, toxic, n.o.s. (trans-hex-2-enal), ENVIRONMENTALLY HAZARDOUS ALDEHYDES, FLAMMABLE, TOXIC, N.O.S. (trans-hex-2-enal), MARINE POLLUTANT ALDEHYDES, FLAMMABLE, TOXIC, N.O.S. (trans-hex-2-enal)
Transport hazard class(es) DOT  Class Label	 3 Flammable liquids 3, 6.1
ADR  Class Label	 3 (FT1) Flammable liquids 3+6.1
IMDG  Class Label	 3 Flammable liquids 3/6.1
IATA  Class Label	 3 Flammable liquids 3 (6.1)
Packing group DOT, ADR, IMDG, IATA	III
Environmental hazards: Marine pollutant:	Yes

Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
Special precautions for user Danger code (Kemler): EMS Number:	Warning: Flammable liquids 36 F-E,S-D
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information: DOT Quantity limitations Remarks:	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L Special marking with the symbol (fish and tree).
ADR Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
IMDG Limited quantities (LQ) Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN1988, Aldehydes, flammable, toxic, n.o.s. (trans-hex2-enal), ENVIRONMENTALLY HAZARDOUS, 3 (6.1), III

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.

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

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

Specific treatment (see on this label).

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