

GPS Safety Summary

Triallyl isocyanurate

This Product Safety Summary is intended to provide a general overview of the chemical substance in the context of ICCA Global Product Strategy. The information on the summary is basic information and is not intended to provide emergency response information, medical information or treatment information.

Substance name

Triallyl isocyanurate CAS-No.: 1025-15-6

General statement

Triallyl isocyanurate is used as a crosslinking agent for rubber products and plastics products. Application fields are the manufacture of rubber and plastics products in industrial settings. Thus, consumer risk and exposure is unlikely.

The environmental effects, ecotoxicology and toxicology information available for triallyl isocyanurate is provided based on studies and/or a reliable evaluation of its hazardous properties.

General and substance specific operational conditions and risk management measures are in place preventing exposure to workers and release to the environment.

Chemical identity

Triallyl isocyanurate
TAICROS®
1,3,5-triallyl-1,3,5-triazinane-2,4,6-
trione
1025-15-6
213-834-7
C ₁₂ H ₁₅ N ₃ O ₃

Structure	
Chemical characterization	organic
Synonyms	1,3,5-Triazine-2,4,6(1H,3H,5H)-trione,
	1,3,5-tri-2-propen-1-yl-;
	1,3,5-Tri-2-propenyl-1,3,5-triazine-
	2,4,6(1H,3H,5H)-trione;

Uses and application

Triallyl isocyanurate is used as a crosslinking agent for rubber products and plastics products. Application fields are the manufacture of rubber and plastics products in industrial settings.

Physical/chemical properies

Triallyl isocyanurate is a waxy solid with melting point nearly at standard temperature and a density of 1.16 g/cm^3 , which is higher than that of water. The substance has a low vapor pressure and is not flammable. The substance has a moderate water solubility of 3.5 g/l.

Property	Value
Form(s)	waxy
Physical state	solid
Color	colorless to slightly yellow
Odor	odorless
Density	1.16 g/cm ³ (20°C)
Melting/boiling point	24.8 °C / 311 °C (101.3 kPa)
Explosive properties	non explosive
Flash point	159.5 °C (101.3 kPa)
Auto-ignition temperature	410 °C
Vapor pressure	0.00017 Pa (20 °C)
Molecular weight	249.27
Water solubility	3.5 g/l (20 °C)
Octanol-water partition	log Kow (Pow) 2.2 (25 °C)
coefficient	
Surface tension	not surface active

Health effects

Triallyl isocyanurate has a moderate acute toxicity by oral and dermal exposure. The substance is not irritating to the eye and the skin and is also not a skin sensitizer. The substance is also not mutagenic / clastogenic.

After repeated exposure in the rat the substance causes toxic effects in the target organ liver.

Health effects	
Effect Assessment	Result
Acute toxicity (oral, dermal	moderate toxicity after a single
and inhalation)	ingestion and single skin contact
Irritation/corrosion	not irritating to the eye,
Skin/eye/respiratory tract	not irritating to the skin
Sensitization	not sensitizing
Mutagenicity / clastogenicity	not mutagenic / not clastogenic
Toxicity after repeated	toxic - target organ liver
exposure	
Toxicity for reproduction	no data

Environmental effects

Effect Assessment	Result
Aquatic toxicity	not harmful to aquatic organism
Fate and Behavior	Result
Biodegradation	not readily biodegradable
Bioaccumulation potential	no bioaccumulation expected
PBT/vPvB conclusion	not considered to be either PBT or vPvB

Based on available data for the substance, triallyl isocyanurate is not harmful to aquatic organisms. The product is not readily biodegradable and it has no potential to bioaccumulate.

Exposure

Human health

Worker:

Worker exposure to this chemical in the manufacturing facilities is low because the process, storage and handling operations are enclosed. Specific operational conditions and risk management measures assure limited workplace exposures. These practices include handling with good ventilation. All workers are trained in the safety measures of handling the substance including using personal protective equipment. Exposure of the worker has been assessed. The occupational use of this substance is considered to be safe for the worker following the recommended safety measures given in the (M)SDS.

Consumer:

Consumers will most probably not come in contact with triallyl isocyanurate.

Environment

Exposure to the environment has been assessed. Any exposure will generally be lower than concern levels.

Risk management recommendations

TAICROS® is stored in tightly sealed receptacles under cool and dry conditions. Avoid temperatures in excess of 60°C for longer periods. Avoid contact with incompatible materials e.g. peroxides, azo compounds. If there is the possibility of skin/eye contact the personal protective measures (hand/eye/body protection) should be observed.

State agency review

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- EU REACH registration number: 01-2119932313-47-0000
- EU-GHS Regulation (EU) No. 1272/2008

Regulatory information/classification and labelling

GHS-Labeling

Statutory basisGHS as per Regulation ST/SG/AC.10/30Symbol(s)Image: Constant of the symbol		
Symbol(s)Image: Constant of the symbol of the s	Statutory basis	GHS as per Regulation ST/SG/AC.10/30
Signal word(s)WarningHazard statement(s)H302: Harmful if swallowed.H312: Harmful in contact with skin	Symbol(s)	
Hazard statement(s) H302: Harmful if swallowed.	Signal word(s)	Warning
H312: Harmful in contact with skin	Hazard statement(s)	H302: Harmful if swallowed.
1312. Harmut in contact with skin.		H312: Harmful in contact with skin.
H373: May cause damage to organs (liver)		H373: May cause damage to organs (liver)
through prolonged or repeated exposure		through prolonged or repeated exposure
(oral and dermal)		(oral and dermal)

Precautionary statement(s)	 P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash hands thoroughly with soap and water after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P309+P311: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. P330: Rinse mouth.
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Glossary

Acute toxicity	harmful effects after a single exposure
Biodegradable	breakdown of materials by a physiological environment
Bioaccumulation	accumulation of substances in the environment
Carcinogenicity	effects causing cancer
Chronic toxicity	harmful effects after repeated exposures
GHS	Global Harmonized System on Classification and Labelling of Chemicals
Mutagenicity	effects that change genes
РВТ	persistent, bioaccumulative and toxic
REACH	Registration, Evaluation and Authorisation of Chemicals
Reprotoxicity	combining teratogenicity, embryo toxicity and harmful effects on fertility
Sensitizing	allergenic
Teratogenic	effects on fetal morphology

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Performance of the chemical described herein should be verified by testing which should be carried out only by qualified experts.

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