

GPS Safety Summary

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt

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

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt
 CAS-No.: 17766-26-6

General statement

Consumer risk and exposure is unlikely as 1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt is manufactured and handled almost exclusively in industrial settings.

The environmental effects, ecotoxicology and toxicology information available for 1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt 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

Name	1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt
Brand names	TMT
Chemical name (IUPAC)	1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt
CAS number	17766-26-6
EC number	241-749-5

Molecular formula	C ₃ H ₃ N ₃ S ₃ 3Na
Structure	
Chemical characterization	organic
Synonyms	Trimercapto-s-triazine, trisodium salt

Uses and application

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt is used as a processing aid in the precipitation of heavy metals in aqueous media in form of a diluted solution. Application fields are combustion plants, wet scrubbers in industrial settings as well as water treatment plants.

Physical/chemical properties

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt is a colorless and odorless solid at standard temperature with a density of 1.583 g/cm³, which is higher than that of water. The substance is not explosive. The water solubility is high at 346.15 g/l and the substance is very hygroscopic.

Property	Value
Form(s)	solid
Physical state	solid
Color	colorless
Odor	odorless
Density	1.583 g/cm ³ (20 °C)
Melting/boiling point	82 °C (101.3 kPa)/decomposes >370 °C
Explosive properties	non explosive
Self-ignition temperature	250 °C (not self-heating)
Vapor pressure	5.45 10 ⁻¹⁴ Pa (25 °C)
Molecular weight	246.24 g/mol
Water solubility	346.15 g/l (20 °C)
Octanol-water partition coefficient	log Kow (Pow) 0.01 (25 °C)
Surface tension	not surface active

Health effects

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt has a low acute toxicity by oral and dermal exposure. The substance causes serious eye irritation. The substance is not irritating to the skin, not skin sensitizing, not mutagenic / clastogenic.

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

Environmental effects

Based on available data for the substance, 1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt is not harmful to aquatic organisms. The product is not readily biodegradable and it has no potential to bioaccumulate.

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

Exposure

Human health

Worker:

1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt is not expected to be present in the atmosphere based on the low vapour pressure and its hygroscopic properties. Specific operational conditions and risk management measures assure limited workplace exposures. 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 safety data sheet.

Consumer:

Consumers will most probably not come in contact with 1,3,5-triazine-2,4,6(1H,3H,5H)-trithione, trisodium salt.

Environment

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

Risk management recommendations

TMT 55® and TMT 15® are stored in alkali resistant receptacles, keeping them tightly sealed, under cool and dry conditions.

Storage should be away from oxidizing agents and / or acids.


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: 01-2119970332-41-0000
- EU-GHS Regulation (EU) No. 1272/2008

Regulatory information/classification and labelling

GHS-Labeling

Statutory basis	GHS as per Regulation ST/SG/AC.10/30
Symbol(s)	
Signal word(s)	Warning
Hazard statement(s)	H302: Harmful if swallowed. H319: Causes serious eye irritation.
Precautionary statement(s)	P264: Wash hands thoroughly with soap and water after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

<p>P337+P313: If eye irritation persists: Get medical advice/attention.</p> <p>P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P330: Rinse mouth.</p>

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
PBT	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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