

SECTION 1. IDENTIFICATION**Product identifier**

Product name : TPS™ 32

Other means of identification

Product code : 001832

Synonyms : Polysulfide

Recommended use of the chemical and restrictions on use

Recommended use : Additive for industrial lubricants

Restrictions on use : For industrial use only.

Details of the supplier of the safety data sheet

Company name of supplier : Arkema Inc.

Address : 900 First Avenue
King of Prussia, PA 19406

Thio and Fine Chemicals

Telephone : (800) 331-7654
(Monday through Friday, 8:00 AM to 5:00 PM EST)**Emergency telephone number**Transportation : CHEMTREC:
(800) 424-9300
(24 hrs., 7 days a week)Medical: : Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**Skin sensitisation : Sub-category 1B

Other hazards

None known.

GHS label elements

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: H317 May cause an allergic skin reaction.

Precautionary statements

Prevention:
 P261 Avoid breathing mist or vapours.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves.

Response:
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P333 + P313 If skin irritation or rash occurs: Get medical attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:
 P501 Dispose of contents or container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Substance

Chemical nature

: Polysulfide

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Polysulfides, di-tert-dodecyl	68425-15-0*	< 100	-

* Indicates that the identifier is a CAS No.

SECTION 4. FIRST AID MEASURES

- If inhaled : If inhaled, remove victim to fresh air.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention if symptoms occur.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

- Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Carbon dioxide (CO₂)
Foam
Dry chemical
- Unsuitable extinguishing media : A solid stream of water can cause frothing and spattering.
- Specific hazards during firefighting : When burned, the following hazardous products of combustion can occur:
Carbon oxides
Sulphur oxides
Hydrogen sulphide
Hazardous organic compounds

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Further information : Do not permit water to enter containers.
Material may spatter or foam if contacted with water.
Fire fighting equipment should be thoroughly decontaminated after use.

Special protective equipment for firefighters : Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand, NIOSH approved or equivalent).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Prevent further leakage or spillage if you can do so without risk.
Ventilate the area.
Avoid generation of vapors.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods and materials for containment and cleaning up : Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay and place into suitable properly labeled containers for prompt disposal.
Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid breathing vapor or mist.
Avoid prolonged or repeated contact with skin.
Wash thoroughly after handling.
Emptied container retains vapor and product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Conditions for safe storage : Keep in a dry, cool place.
Store in closed containers, in a secure area to prevent container damage and subsequent spillage.

Materials to avoid : Store separate from:

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Strong oxidizing agents
Acids
Hydrogen peroxide
Hypochlorites
Nitric acid

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits for: hydrogen sulfide, ethylene oxide. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Personal protective equipment

Respiratory protection : Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Hand protection

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Remarks	: Glove materials: Nitrile rubber Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing immediately and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.
Eye protection	: Where eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: colorless, yellow
Odour	: Slightly acrid
Odour Threshold	: No data available
pH	: No data available
Melting point/ range	: -54 °F / -48 °C Method: OECD Test Guideline 102
Boiling point/boiling range	: 380.7 °F / 193.7 °C Method: OECD Test Guideline 103
Flash point	: 307 °F / 153 °C Method: ASTM D 93
Evaporation rate	: No data available
Flammability (liquids)	: The product is not flammable.
Upper explosion limit / Upper flammability limit	: No data available

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Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.000417 Pa (68 °F / 20 °C) Method: OECD Test Guideline 104
Relative vapour density	:	No data available
Relative density	:	1.0028 (68 °F / 20 °C) Method: OECD Test Guideline 109
Density	:	1,002.8 kg/m ³ (68 °F / 20 °C) Method: OECD Test Guideline 109
Solubility(ies)		
Water solubility	:	0.26 µg/l (68 °F / 20 °C) Method: OECD Test Guideline 105
Solubility in other solvents	:	Description: Soluble in hydrocarbons
Partition coefficient: n-octanol/water	:	log Pow: > 12 Method: calculated
Auto-ignition temperature	:	464 °F / 240 °C Method: Standard: A15
Decomposition temperature	:	> 392 °F / > 200 °C
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	716.19 mm ² /s (68 °F / 20 °C) 130.35 mm ² /s (104 °F / 40 °C)
Particle characteristics		
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	The product is stable under normal handling and storage conditions.

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Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Acids Strong oxidizing agents Hydrogen peroxide Hypochlorites Nitric acid
Hazardous decomposition products	:	Thermal decomposition giving flammable and toxic products Carbon oxides Sulphur oxides Hydrogen sulphide Hazardous organic compounds

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Acute oral toxicity : LD0 (Rat): > 2,500 mg/kg
Assessment: No deaths occurred.

Acute dermal toxicity : LD0 (Rat): > 2,000 mg/kg
Assessment: No deaths occurred.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Species : Rabbit
Result : Mild skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified due to lack of data.

Components:**Polysulfides, di-tert-dodecyl:**

Test Type : LLNA: Local Lymph Node Assay
Species : Mouse
Result : The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Genotoxicity in vitro : Remarks: No genetic changes were observed in laboratory tests using:
bacteria, human cells.

Remarks: Genetic changes were observed in laboratory tests using:
animal cells

Genotoxicity in vivo : Remarks: No genetic changes were observed in laboratory tests using:
rats

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Effects on fertility : Test Type: Reproductive/Developmental Effects Screening Assay
Species: Rat
Application Route: Oral
Result: No toxicity to reproduction.

Effects on foetal development : Test Type: Exposure during pregnancy
Species: Rat
Application Route: Oral
Result: No birth defects were observed.

Test Type: Exposure during pregnancy
Species: Rabbit
Application Route: Oral
Result: No birth defects were observed.

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity**Components:****Polysulfides, di-tert-dodecyl:**

Species : Rat
Application Route : Oral

Exposure time : Subchronic
Symptoms : No adverse systemic effects reported.

Aspiration toxicity

Based on available data, the classification criteria are not met.

Components:**Polysulfides, di-tert-dodecyl:**

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Polysulfides, di-tert-dodecyl:**

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia (water flea)): Exposure time: 48 h
Remarks: No effect up to the limit of solubility.
Water accommodated fraction was tested.

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No effect up to the limit of solubility.
Water accommodated fraction was tested.

NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No effect up to the limit of solubility.
Water accommodated fraction was tested.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)):
Exposure time: 32 d
Remarks: No effect up to the limit of solubility

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)):
Exposure time: 21 d
Test Type: Reproduction Test
Remarks: No effect up to the limit of solubility

Toxicity to microorganisms : NOEC (Pseudomonas putida): 10.000 mg/l

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Exposure time: 72 h
Test Type: Growth inhibition

Persistence and degradability

Components:

Polysulfides, di-tert-dodecyl:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d

Bioaccumulative potential

Components:

Polysulfides, di-tert-dodecyl:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 1
Exposure time: 14 d

Partition coefficient: n-octanol/water : log Pow: > 6.2 (162 °F / 72 °C)
pH: 7

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Disposal via incineration is recommended.
Dispose of in accordance with federal, state and local regulations.
Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.
Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate.
Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IMDG-Code**

Not regulated as a dangerous good

National Regulations**49 CFR Road**

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION**Chemical Inventory Status**

US. Toxic Substances Control Act	TSCA	The components of this product are all on the Active TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	All components of this product are listed or exempted
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	All components of this product are listed or exempted
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	All components of this product are listed or exempted
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	All components of this product are listed or exempted
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	All components of this product are listed or exempted
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	All components of this product are listed or exempted
Australian Inventory of Industrial Chemicals	AU AIICL	All components of this product are listed or exempted

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Taiwan Chemical Substance Inventory (TCSI) TCSI All components of this product are listed or exempted

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

<u>Chemical name</u>	<u>CAS-No.</u>	<u>SARA Reportable Quantities</u>	<u>SARA Threshold Planning Quantity</u>
Oxirane	75-21-8	10 lbs	1000 lbs

SARA Title III - Section 311/312 Hazard Categories:

Respiratory or skin sensitisation

SARA Title III – Section 313 Toxic Chemicals:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

<u>Chemical name</u>	<u>CAS-No.</u>	<u>Reportable quantity</u>
Oxirane	75-21-8	10 lbs

United States – State Regulations

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

<u>Chemical name</u>	<u>CAS-No.</u>
Oxirane	75-21-8

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California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Chemical name
Oxirane

CAS-No.
75-21-8

SECTION 16. OTHER INFORMATION

Latest Revision(s):

Reference number:	200005570
Date of Revision:	03/09/2026
Date Printed:	03/10/2026

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The Company adheres to a strict policy that applies to the use of any of its products in medical device applications. This policy can be found at <https://www.arkema.com/global/en/social-responsibility/innovation-and-sustainable-solutions/responsible-product-management/medical-device-policy/> which is incorporated herein by reference and made a part hereof. Except as expressly authorized, the Company (i) has designated specific medical grade compositions for products used in medical device applications and Company products not so designated are not authorized for use in medical device applications and (ii) strictly prohibits the use of any of its products in medical device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Company does not design, manufacture and/or directly sell any medical devices. The Company does not co-design, or offer assistance to any purchaser of its products, in their design, manufacture and/or sale of products for medical devices. It is the sole responsibility of the manufacturer

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of medical devices to determine the suitability of all raw material, products and components, including any medical grade products, in order to ensure that the medical device is safe for end-use and complies with all applicable legal and regulatory requirements and to conduct all necessary tests and inspections.