

SAFETY DATA SHEET

TOLCIDE® PS70A

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Date: 28/02/2007

Version: 1 UK

Cancels and replaces version: UK

1 Product and company identification.

PRODUCT NAME : TOLCIDE® PS70A
Use : Biocides.
(For further information, refer to the product technical data sheet).
SUPPLIER : Manufacturer :
Name : Rhodia UK Limited
Address : P.O Box 9837
Oldbury
West Midlands
B69 4WD, UK
Telephone number : 0044 121 541 3731 (UK: 0121 541 3731)
Telefax number : 0044 121 541 3859 (UK: 0121 541 3859)
EMERGENCY TELEPHONE : **00 44 121 552 6805 (UK: 0121 552 6805)**
NUMBER

2 Composition / information on ingredients

>>> PREPARATION

Chemical nature : Aqueous solution
Components contributing to the hazard : TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM SULPHATE (THPS) - Self-classification : Repr Cat 2: R61; T: R23; Xn: R22; Xi: R41, R43; N: R50
EC N° :259-709-0 (CAS : 55566-30-8) : 69 - 72%

Polymer containing phosphonate, sulphonate, and carboxyl functional groups, sodium salt
- Self-classification : R52/53
(CAS : 397256-50-7) : 1.5 - 2.0%

3 Hazards identification

MOST IMPORTANT HAZARDS

Adverse human health effects

: Toxic by inhalation.
Harmful if swallowed.
Risk of serious damage to eyes.
May cause sensitization by skin contact.
May cause harm to the unborn child.
Main symptoms : Lachrymatory effect.

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Further data	:	Possible damage to liver following repeated or prolonged exposure by ingestion.
Environmental effects	:	Very toxic to aquatic organisms.
Physical and chemical hazards	:	
- Fire or explosion	:	NO particular fire or explosion hazard.
Specific hazards	:	According to EC criteria, this preparation is classified as : - TOXIC TO REPRODUCTION, Category 2. - TOXIC. - IRRITANT. - SENSITIZING. - DANGEROUS FOR THE ENVIRONMENT.

4 First-aid measures

Inhalation	:	Move the person away from the contaminated area. Make the affected person rest. Obtain medical attention. Show this sheet to the doctor.
Skin contact	:	Remove all contaminated clothing and footwear. Wash with soap and water. Wash immediately and thoroughly for a prolonged period (at least 15 minutes). In case of inflammation (redness, irritation, ...) obtain medical attention.
Eye contact	:	Immediately rinse with plenty of running water for a prolonged period, (at least 15 minutes) whilst keeping the eyes wide open Always obtain medical advice immediately, even if there are no symptoms. Show this sheet to the doctor.
Ingestion	:	NEVER attempt to induce vomiting. Do not give anything to drink. Always obtain medical attention immediately. Show this sheet to the doctor.
Further information	:	Establish a first aid action plan before using this product. Use appropriate protective equipment when treating a contaminated person. Use first aid techniques to restore vital functions. Place contaminated clothing in a sealed bag for disposal.

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5 Fire - fighting measures

Extinguishing media

- Suitable : All extinguishing agents can be used (water, foam, powders, carbon dioxide, sand ...).
 - Not suitable : None. If there is a fire close by, use suitable extinguishing agents.
- Specific hazards : Toxic gases or vapours are released.
- Protection of fire-fighters : Self-contained breathing apparatus.
Complete protective clothing.
-

6 Accidental release measures

- Personal precautions : Avoid contact with eyes, skin and respiratory system
If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade).
- full protective clothing and equipment.
For further information refer to section 8 "Exposure-controls/personal protection".
- Environmental precautions : Prevent the product from spreading into the environment.
Contain the spilled material by bunding.
- Methods for cleaning up
- Recovery : Recover as much of the product as possible. Absorb the product onto porous material. Transfer the product into a spare container: - suitably labelled. Then take the emergency containers to an area reserved for subsequent recycling or disposal.
 - Neutralization : Absorb spillage with:
 - diatomaceous earth.
 - sand or inert absorbent.
 - Cleaning/Decontamination : Wash non-recoverable remainder with large amounts of water. Recover the cleaning water for subsequent disposal.
 - Disposal : Place in an appropriate container and dispose of the contaminated material at a licensed site.
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7 Handling and storage

HANDLING

- Technical measures : Ventilation.
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Measures	:	This product must only be handled by skilled operators Avoid exposure: Work in a well-ventilated area. Avoid forming aerosols. Avoid the formation of mists in the atmosphere. Do NOT handle without gloves.
Safe handling advice	:	Obtain special instructions before use.(Read the technical data sheet). Handle and use in accordance with good occupational hygiene and safety practice. Do not mix with incompatible materials (See list section 10).
STORAGE		
Technical measures	:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
Storage conditions	:	
- Recommended	:	Store: - in a cool, dry area
Incompatible products	:	Strong reducing agents. Strong oxidizing agents. Strong acids. Strong bases
Packaging	:	- Polyethylene or polypropylene drums. (high density)
Packaging materials	:	
- Recommended	:	Plastic materials (polyethylene, polypropylene). (high density)

8 Exposure controls / personal protection

Engineering measures	:	Avoid splashes (appropriate clothing, protective screens on machines etc.) Ensure good ventilation of the work station.
Control parameters	:	
Occupational exposure limits	:	
- Limits (UK)	:	No specific limits.
Surveillance procedures	:	Reduce exposure time to the minimum necessary.
Personal protective equipment	:	
- Respiratory protection	:	If mist is formed: Respiratory protective device with a particle filter.
- Hand protection	:	Use suitable chemical-resistant protective gloves (compliant with Standard EN 374-1) Protective gloves must be chosen according to the function of the work station: other chemicals which may be handled, physical protection necessary (resistance to cutting, puncture, heat), dexterity required. The selection of gloves must take into account the extent and

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		duration of use at the workstation. Permeation, thickness and protection class according to Standard EN 374-1 : 75% THPS Glove material :Protective gloves made of PVC. Thickness : 1.23 mm Breakthrough time : >480 minutes Protection class : 6
		Glove material : Nitrile protective gloves Thickness : 1.23 mm Breakthrough time : >480 minutes Protection class : 6 (Unpublished internal reports)
- Eye protection	:	Safety spectacles and a face shield.
- Skin and body protection	:	Wear suitable protective clothing, gloves and eye/face protection.
- Selection criteria	:	Protective equipment must be chosen according to current CEN standards and in cooperation with the supplier of protective equipment. Personal protective equipment must be defined after risk assessment for the workstation.
Collective emergency equipment	:	Emergency equipment and first-aid box with instructions readily available. Eye fountain. Safety shower.
Hygiene measures	:	Use clean and correctly maintained personal protective equipment Keep personal protective equipment in a clean place, away from the work area Always wash your hands immediately after handling this product, and once again before leaving the workplace. Do NOT eat or drink in the workplace.
Further information	:	The user is responsible for monitoring the working environment in accordance with local laws and regulations.

9 Physical and chemical properties

APPEARANCE

- Physical state	:	Liquid.
- Colour	:	colourless to pale yellow.
Odour	:	characteristic.
pH	:	3 - 6 at 20°C
Specific temperatures	:	
- Freezing	:	-15°C.
Flammability characteristics	:	
- Flash point	:	Not applicable.

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Oxidizing properties	:	Not applicable
Specific gravity	:	1280 - 1360 kg/m ³ , at 20°C.
Solubility	:	
- in water	:	Miscible (in all proportions).
- in organic solvents	:	Not determined.
Octanol/water partition coefficient	:	(THPS 75%)-9.8 (log POW). (evaluation by structure-activity relationship)

10 Stability and reactivity

Stability	:	Stable under normal conditions of use.
Hazardous reactions	:	
- Conditions to avoid	:	Decomposes:above 160°C.
- Materials to avoid	:	- strong bases. - strong reducing agents. - strong acids. - strong oxidizing agents.
- Hazardous decomposition products	:	(Sulphur oxides).(Phosphorus oxides).(Carbon oxides (CO + CO ₂)).(Phosphine)(Hydrogen).

11 Toxicological information

NOTE	:	All the results given under this heading refer to: 75% THPS Aqueous solution
Acute toxicity	:	The preparation has not been tested LC 50 inhalation, 4h : 0.59 mg/l. (Rat) for males and females (Published data). Toxic by inhalation. Not classified as harmful by contact with skin (by calculation according to the conventional method) LD 50 oral: 575 mg/kg (Rat) for males and females (Unpublished internal reports) Harmful if swallowed.
Acute symptoms	:	Watering of the eyes.
Local effects	:	NOT considered to be : Irritating to the respiratory system. According to OECD method 404 : Not irritating to rabbits on cutaneous application. (Unpublished internal reports)

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	According to OECD method 405 : Extremely irritating to rabbits on ocular application. Risk of serious damage to eyes. (Unpublished internal reports)
Sensitisation	: May cause sensitization on contact with skin. (Unpublished internal reports)
Repeated dose toxicity	
Specific effects	: on ingestion Repeated dose toxicity (90 days)(Rat) for males and females Hepatotoxic effects. No observed effect level (NOEL) : 1 mg/kg/day (Unpublished internal reports)
- Carcinogenicity	: Oral toxicity tests on rats and mice did not reveal any carcinogenic potential. (Published data).
- Mutagenicity	: Ames test (<i>S. typhimurium</i>) (with or without metabolic activation). Negative. (Unpublished internal reports)
	Chromosomal aberrations : Mammalian cells (CHO) In vitro (with or without metabolic activation). Positive. (Unpublished internal reports)
	In vitro UDS test (Rat) Negative. (Unpublished internal reports)
	Mouse lymphoma test/TK (with or without metabolic activation). Positive. (Unpublished internal reports)
	Rodent dominant Lethal test (Rat) In vivo Negative. (Unpublished internal reports)
	In vivo micronucleus test

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	(Mouse) Negative. (Unpublished internal reports)
- Reproductive toxicity	: Product is not considered to be genotoxic Fertility study (2 generations)(Rat) no impairment of fertility has been observed on ingestion (Unpublished internal reports) Developmental toxicity study: on ingestion (Rat) NOEL, maternal toxicity : 15 mg/kg/day NOEL, foetal toxicity : 30 mg/kg/day (Unpublished internal reports) Developmental toxicity study: on ingestion (Rabbit) NOEL, maternal toxicity : 18 mg/kg/day NOEL, foetal toxicity : 18 mg/kg/day Effects on development were observed May cause harm to the unborn child. (Unpublished internal reports)
- Neurotoxicity	: Screening biochemistry test kit for cholinesterase activity inhibition The product does not induce inhibition

12 Ecological information

MOBILITY

Adsorption/desorption	: Data available only for some components THPS(75% solution) Log Koc = 2.2 Moderately mobile in soils (Unpublished internal reports)
Expected behaviour of the product	: Ultimate destination of the product : WATER.

DEGRADABILITY

Abiotic degradation

- Other physico-chemical reactions	: Product is easily oxidizable in aqueous media in dilute solutions.
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BIODEGRADABILITY

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- Ultimate aerobic biodegradability	:	THPS Simulation study : 70% biodegradation after 21 days. (US EPA FIFRA, Subdivision N, § 162-4) Readily biodegradable. (Unpublished internal reports) Polymer Not readily biodegradable. (Unpublished internal reports)
- Anaerobic biodegradation.	:	THPS Simulation study : 60 % biodegradation after 30 days. (US EPA FIFRA, Subdivision N, § 162-3) (Unpublished internal reports)
Persistence	:	Product is not persistent.
BIOACCUMULATION		
Octanol/water partition coefficient	:	Refer to § 9 for actual figures.(THPS) Not potentially bioaccumulable.
ECOTOXICITY		
Effects on the aquatic environment	:	The preparation has not been tested THPS(75% solution) LC 50 (Fish: Oncorhynchus mykiss) / 96h: 119 mg/l. LC 50 (Fish: Lepomis macrochirus) / 96h: 93 mg/l. EC 50 (Daphnia: Daphnia magna)/48 h: 19.4 mg/l. EC 50 (Fresh water algae: Pseudokirchneriella subcapitata) / 96 h : 0.20 mg/l. EC 50 (Bacteria : Activated sludge) / 3 hr(s) : 24 mg/l (Unpublished internal reports) Polymer EC 50 (Daphnia: Daphnia magna)/48 h: 17 mg/l. Harmful to aquatic organisms tested. (Unpublished internal reports) (Results are expressed in relation to the dry product). EC 50 (Bacteria : Activated sludge) / 3 hr(s) : 2200 mg/l (Unpublished internal reports) (Results are expressed in relation to the dry product). EC 50 (Crustacean: Americamysis bahia) / 96 h : 1000 mg/l. (Unpublished internal reports)
Further information	:	This preparation is classified as : - DANGEROUS FOR THE ENVIRONMENT (N) (by calculation according to the conventional method)

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13 Disposal considerations

RESIDUES FROM PRODUCT

- Prohibition : Do NOT discharge waste into drains.
- Destruction/Disposal : Dispose of in accordance with relevant local regulations.
Dispose of this product as hazardous waste. Incinerate at a licensed installation.

CONTAMINATED PACKAGING

- Decontamination/cleaning : Take preliminary precautions based on the dangerous properties of the product.
Empty the packaging completely prior to disposal.
- Destruction/Disposal : Depending on local facilities, recycle or incinerate the packaging at an authorised site.

- NOTE : The user's attention is drawn to the possible existence of local regulations regarding disposal.
-

14 Transport information

INTERNATIONAL REGULATIONS

Land

- Rail/road (RID/ADR) : Class/Division : 6.1
Packing group: III.
Hazard identification number: 60
UN number: 2810
Labelling: 6.1.
Proper Shipping Name (Technical Name) : TOXIC LIQUID, ORGANIC. N.O.S. (Contains Tetrakis(hydroxymethyl)phosphonium sulphate)

Sea (IMO/IMDG)

- : Class/Division : 6.1
Packing group: III.
UN Number: 2810
Labelling: 6.1.
Marine pollutant: NO.
Emergency schedule (EmS): F-A, S-A.
Proper Shipping Name (Technical Name) : TOXIC LIQUID, ORGANIC. N.O.S. (Contains Tetrakis(hydroxymethyl)phosphonium sulphate)
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Air (ICAO-IATA) : Class/Division : 6.1
 Packing group: III.
 UN number: 2810
 Labelling: 6.1.
 Proper Shipping Name (Technical Name) : TOXIC LIQUID,
 ORGANIC. N.O.S. (Contains
 Tetrakis(hydroxymethyl)phosphonium sulphate)
 Passenger aircraft: Packing instruction: 611 Quantity : 60 L
 Cargo aircraft : Packing instruction: 618 Quantity : 220 L

OTHER REGULATIONS

- United Kingdom: Rail/road : Substance identification number: 2810.
 Classification for conveyance: 6.1.
 Packing group: III.
 Emergency action code: 2X.

>>Further information : Empty containers which have not been cleaned are subject to the same transport regulations as those which are full.

NOTE : The above regulatory prescriptions are those valid on the date of publication of this sheet. However, given the possible evolution of transport regulations for hazardous materials and in the event of the SDS in your possession dating back more than 12 months, it is advisable to check their validity with your sales office.

15 Regulatory information

LABELLING

EC regulations : Mandatory labelling (self-classification) of hazardous preparations: **APPLICABLE**

- Identification of the hazardous product : TOLCIDE® PS70A
 Contains: Tetrakis(hydroxymethyl)phosphonium sulphate

- Classifications/Symbols : - **TOXIC (T)**
 - **DANGEROUS FOR THE ENVIRONMENT (N)**

- R phrases : R 23: Toxic by inhalation.
 R 22: Harmful if swallowed.
 R 41: Risk of serious damage to eyes.
 R 43: May cause sensitisation by skin contact.
 R 61: May cause harm to the unborn child.
 R 50: Very toxic to aquatic organisms.

- S phrases : S 24: Avoid contact with skin.
 S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
 S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S 53: Avoid exposure - obtain special instructions before use.
 S 61: Avoid release to the environment. Refer to special

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- Market limitation : instructions/safety data sheet.
: Restricted to professional users.
- >>Further regulations
United Kingdom : Handle in accordance with relevant British legislation:
Chemical Hazard Information and Packaging for Supply Regulations
Control of Substances Hazardous to Health Regulations
Environmental Protection Act
Collection and Disposal of Waste Regulations
Carriage of Dangerous Goods by Road Regulations
Carriage of Dangerous Goods by Rail Regulations
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) and use of Transport Pressure Receptacles Regulations
- NOTE : The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.
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16 Other information

Further product information

All data quoted in this SDS are owned by Rhodia unless otherwise indicated

- R Phrases of § 2 & 3 : R 23: Toxic by inhalation.
R 22: Harmful if swallowed.
R 41: Risk of serious damage to eyes.
R 43: May cause sensitisation by skin contact.
R 50: Very toxic to aquatic organisms.
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 61: May cause harm to the unborn child.
-

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfil his obligations regarding the use of hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring that legal obligations, other than those mentioned, relating to the use and storage of the product, do not exist. This is solely his responsibility.