HPL Additives Limited

MATERIAL SAFETY DATA SHEET

MIKROFINE® TSH / TSH ND

1 IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Product Name	:	**MIKROFINE® TSH/TSH ND**
Chemical Name	:	*p*-Toluene Sulfonyl Hydrazide
Synonyms, Trade Names	:	*p*-Toluene Sulfonyl Hydrazide
Use	:	Chemical blowing agent
Supplier's name	:	HPL Additives Limited
and address	:	803, Vishal Bhawan 95, Nehru Place New Delhi - 110019 (INDIA)
Contact Numbers	:	Telephone +91- 11- 2643 1522 +91- 11- 2642 1570 Fax +91- 11- 2647 4350 +91- 11- 2646 0981 e-mail hpll@hpl-group.com
Information	:	Product Compliance and Regulatory Affairs
Emergency Phone Number(24h)	:	+91-9910486232

2 HAZARDS IDENTIFICATION

Skin	:	May cause skin irritation.
Eye	:	Dust may cause mechanical irritation and possible burns.
Inhalation	:	May cause pulmonary sensitization.
Ingestion	:	Harmful if swallowed. May cause irritation of the digestive tract.
Other hazards	:	Dust explosion hazard. Highly flammable solid.

* MIKROFINE® TSH ND is non-dusty version of MIKROFINE® TSH, incorporating 20% paraffin oil.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	:	*p*-Toluene Sulfonyl Hydrazide
CAS Registry number	:	1576-35-8
EC number	:	216-407-3
Hazard symbol	:	--
Risk Phrases	:	R11, R22, R20/21/22 and R38

4 FIRST AID MEASURES

Eye contact	:	In case of eye contact, wash thoroughly with water. Seek medical advice.
Skin contact	:	In case of skin contact, wash thoroughly with water and Seek medical advice if necessary.
Ingestion	:	If product is swallowed, transfer patient to hospital and seek medical advice.
Inhalation	:	Take patient into a well-ventilated area and seek medical advice if necessary.

5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media	:	Water, dry chemical and foam.
Unsuitable Extinguishing Media	:	High volume water jet.
Fire Fighting Procedures	:	During fire fighting contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water.
Unusual Fire & Explosion Hazards	:	Dust may form explosive mixture with air.
Hazardous Combustion Products	:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Protective Measures in Fire	:	Full protective clothing and self-contained breathing apparatus must be worn during fire fighting.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Use proper personal protective equipment. Avoid generating dusty conditions. Remove all source of ignition. Provide ventilation.
Environmental precautions	:	Prevent contamination of soil, drain and surface water. Product should not be allowed to enter into local drainage or sewer systems.
Method for cleaning up	:	Any spillage should be removed, preferably by vacuum and stored in labeled containers.

7 HANDLING AND STORAGE

Handling	:	Wear protective clothing including breathing apparatus and safety goggles, or eye protection. Wash hands and face thoroughly after handling. Avoid ingestion and inhalation
Storage	:	Keep product pack closed & dry and in original container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep container tightly closed when not in use. Keep away from direct sunlight, source of heat, sparks, open flame static electricity and any source of ignition.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit values	:	**ACGIH**-None listed **NIOSH-**None listed **OSHA-Final PELs-**None listed **OSHA-Vacated PELs-**None listed
Exposure Controls	:	Use adequate ventilation to keep airborne concentrations low. If vent inadequate use NIOSH/MSHA/European Standard EN 149 approved respirator. Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective gloves and protective clothing to prevent skin exposure. If user develops sensitivity to respiratory tract whilst using product, the user should not be exposed to the product any longer.

9 PHYSICAL AND TECHNICAL DATA

Appearance	:	Solid powder
Colour	:	White/Off white
Odour	:	Characteristics odour
Decomposition point (°C)	:	>100 (with deomposition)
Boiling point/Boiling range (°C)	:	Not available
Relative density (gm/cc)	:	~1.55
Flash point (°C)	:	60 (140.0°F)
Oxidising properties	:	Not available
Self ignition temperature	:	Not available
Solubility	:	Insoluble in water, soluble in methanol, ethanol, acids & bases
Vapour pressure	:	Not available
Partition coefficient	:	Not available
Explosive properties	:	Dust explosion hazard
pH	:	Not available
Viscosity	:	Not available

10 STABILITY AND REACTIVITY

Stability	:	Stable under ordinary conditions. Self-accelerating decomposition during prolonged storage at or above 70ºC.
Conditions to avoid	:	Excess heat, ignition sources and dust generation
Materials to avoid	:	Strong oxidising agents, incompatible materials and strong oxidants.
Hazardous decomposition products	:	Toxic fumes of CO, CO_2, NOx and SOx. Although MIKROFINE® TSH/TSH ND decomposes quickly above 100ºC, it can decompose slowly at lower temperatures. In a fire situation, the product will release dense fumes. Risk of explosion if heated under confinement. In the presence of strong alkalis, acids & oxidizing agents it might react to produce hazardous products.

11 TOXICOLOGICAL INFORMATION

Harmful if swallowed, inhaled or absorbed through skin. May cause irritation.

Oral toxicity	:	LD 50 (rats) >283mg/kg	
Dermal toxicity	:	LD 50 (rabbits) >2g/kg	
Irritation	:	Eye (rabbits).....Slight	
		Skin (rabbits).....Negative	
Genotoxicity	:	*Ames* Salmonella	Positive
		CHO-HGPRT	Negative
		Unscheduled DNA synthesis	Negative
		Mouse Micronucleus	Negative
Carcinogenicity	:	Not listed by ACGIH, IARC, NIOSH, NTP or OSHA	
Epidemiology		No information available	
Teratogenicity		No information available	
Reproductive effects		No information available	
Neurotoxicity		No information available	
Mutagenicity		No information available	

12 ECOLOGICAL INFORMATION

Ecotoxicity	:	No information available
Degradability	:	No information available
Bioaccumulation	:	No information available

13 DISPOSAL CONSIDERATIONS

Waste disposal	:	Recover or recycle if possible, otherwise perform incineration.
Product disposal	:	Recover or recycle if possible, otherwise perform incineration.
Container disposal	:	Contaminated container should be disposed off. Accordingly uncontaminated container should be thoroughly cleaned with water or solvent and then can be recycled.

14 TRANSPORTATION INFORMATION

ADR/RID/DOT/IMO/IMDG		
UN NUMBER	:	3226
Hazard Class	:	4.1
Proper Shipping Name	:	*p*-Toluene Sulfonyl Hydrazide
Packing group	:	II

15 REGULATORY INFORMATION

EC No.	:	201-407-3
Contains	:	*p*-Toluene Sulfonyl Hydrazide
Risk Phrases	:	**R11 -** Highly flammable
		R22 - Harmful if swallowed
		R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
		R38 - Irritating to skin
Safety Phrases	:	**S16** - Keep away from sources of ignition - No smoking. **S26 -** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
		S27 - Take off immediately all contaminated clothing
		S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection
		S44 - If you feel unwell, seek medical advice (show the label where possible)
Hazard Symbol	:	--

16 OTHER INFORMATION

THIS MATERIAL PRESENTS RISK OF IGNITION BY ELECTROSTATIC CHARGE.

PRECAUTIONS SHOULD BE TAKEN TO MINIMISE RISK

Uses	:	Used primarily as Chemical Blowing Agent
History	:	Edition No. 3
		First issue - 1st May, 2006
		Second issue - May, 2007
		Third issue - May,2008

This product is listed in the following chemical inventories

TSCA	ENCS	ASIA-PAC
DSL	PICCS	
EINECS	AICS	

This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

The information given in this document is only a recommendation believed to be reliable and is given in good faith but without warranty. Our advice does not release users from the obligation of checking its validity and to test our products as to their suitability for the intended use. Specified properties mentioned in this document are based on our historical production performance and these properties or the whole document is subject to change without any prior notice at our sole discretion. We are under no obligation to call back earlier issued documents.