

MATERIAL SAFETY DATA SHEET

: According to EC-directive 2001/58/EC

Rubber Accelerator NOBS (MBS)

HS Code: 29342000.90

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product label name	N-Oxydiethylene-2-benzothiazole sulfonamide
Supplier	Qingdao YLSCH Industry&Trade Co.,Ltd Room 501,2-3 Unit. No.8,Zhengzhou Road, Qingdao,China. TEL: +86 18661665800
Emergency telephone	+86 18661665800
Intended use	Rubber Vulcanization Accelerator

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	N-氧化二乙烯-2-苯并噻唑磺酰胺 N-Oxydiethylene-2-benzothiazole sulfonamide
CAS NO.	102-77-2
Chemical description	Light yellow granule
TSCA NO.	none
EINECS NO.	none
Other information	C ₁₁ H ₁₂ N ₂ S ₂ O

3. HAZARDS IDENTIFICATION

Repeated contact may cause skin sensitization. Very toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Repeated contact may cause skin sensitization.
First aid	
General	In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
Eye	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to Ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion	Rinse mouth, give water to drink.
Advice to physician	No specific recommendations.

5. FIRE-FIGHTING MEASURES

Extinguishing media	Waterspray, water mist, foam, dry chemical powder, CO ₂
Unsuitable extinguishing media	Waterjet.
Special exposure hazards	Emits toxic fumes under fire conditions.
Hazardous decomposition/ Combustion products	Carbon monoxide (CO), Sulfur oxides (SO _x), nitrous gases (NO _x).
Protective equipment	Wear self contained breathing apparatus.
Other information	Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	For personal protection see Section 8. Avoid dust generation.
Environmental precautions	Avoid discharge into the environment.
Methods for cleaning up	Collect as much as possible in a clean container for (preferable) reuse or disposal.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin. Avoid dust generation. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition. Kst: 169 bar.m/s.
Fire and explosion prevention	Maximum corrected explosion pressure: 8.1 bar.
Storage requirements	Store in a dry and cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION



Engineering controls	Avoid dust generation.Ensure good ventilation and local exhaustion of the working area.
Exposure limits	
Name: N-Oxydiethylene-2-benzothiazole sulfonamide	OES-TWA:5.0 mg/m ³
Personal protection	
Respiratory	Avoid breathing dust. In case of insufficient ventilation,wear suitable respiratory equipment.
Hand	Wear suitable gloves.
Eye	Wear safety goggles.
Skin and body	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow granule	Colour	Light-yellow
Odour	---	Boiling point	----
Melting point ≥	80℃	Flash point	Approx. 176℃
Flammability	----	Explosion limits	----
Explosive properties	Dust explosion hazard	Auto ignition temperature	380℃
Oxidizing properties	----	Vapour pressure	----
Density	1.36 g/cm ³ (20℃)	Bulk density	----
Solubility in water	Insoluble in water	Solubility in other solvents	In most organic solvents
pH value	----	Partition coefficient	Log Pow=3.49 (25℃)
Residues (150um)% Max	0.1(Max)	Relative vapour density	----
Viscosity	----	Assay content % ≥	95
Strength of grain(N)	0.6-2.5		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	Heating > 130 °C: May catch fire.
Materials to avoid	Nitrosating agents
Hazardous decomposition products	Thermal decomposition products: carbon monoxide (CO), nitrous gases (NO _x), Sulfur oxides (SO _x).MORPHOLINE (Harmful by inhalation, in contact with skin and if swallowed, Corrosive)

11. TOXICOLOGICAL INFORMATION

Name	N-Oxydiethylene-2-benzothiazole sulfonamide
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Acute toxicity

Oral LG50 rat:>7940 mg/kg.

Dermal LD50 rabbit:>7940 mg/kg.

Irritation

Skin Slightly irritating to skin but not sufficient for classification.

Eye Slightly irritating to eyes but not sufficient for classification.

12. ECOLOGICAL INFORMATION

Name	N-Oxydiethylene-2-benzothiazole sulfonamide
Ecotoxicity	
Fish	96h-LC50 (Lepomis macrochirus): 4.4 mg/l. 96h-LC50 (Oncorhynchus mykiss): 1.3 mg/l. 96h-LC50 (Pimephales promelas): 3.5mg/l.
Daphnia	48h-EC50 (Daphnia magna): 4.0 mg/l.
Algae	96h-IC50 (Selenastrum capricornutum): 2.0mg/l.
Degradation Abiotic	Hydrolysis: 100% (7 days)
Other information	48h-LC50 (Midge): 5.3 mg/l

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment Small quantities: According to local regulations. Large quantities: Consult YLSCH Chemical for special advice.
Contaminated packaging	According to local regulations. Waste code number: Please refer to your specific industry
Other information	in the European Waste Catalogue.

14. TRANSPORT INFORMATION

Land transport (ADR/ RID)

ADR class	9	RID class	9
ADR/RID packing group	----	Hazard Identification No.	90
Substance Identification No.	3077	UN number	3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (N-Oxydiethylene-2-benzothiazole sulfonamide)		

**Sea transport (IMDG-code/ IMO)**

Correct technical name	----	IMDG Class	
UN Number	----	Packaging group	
EMS Number	----		
Air transport (ICAO-TI/ IATA-DGR)			
ICAO-TI/IATA-DGR Class	9	UN number	3077
Packing group	Environmentally hazardous substance, solid, n.o.s.		
Correct technical name	(N-Oxydiethylene-2-benzothiazole sulfonamide)		

15. REGULATORY INFORMATION

Chemical description	N-Oxydiethylene-2-benzothiazole sulfonamide
Labelling according to EC directives	
EC-number	See section 2
R(isk) phrase(s)	R 43 May cause sensitization by skin contact R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
S(afety) phrase(s)	S 24 Avoid contact with skin S 37 Wear suitable gloves S 60 This material and its container must be disposed of as hazardous waste S 61 Avoid release to the environment. Refer to special instruction /Safety data sheets
Other information	To be displayed on the label: "EC label".
Wassergefährdungsklasse (WGK)	2 (VwVwS Anhang 3, Nr. 6608)

16. OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.