otto chemie pvt ltd

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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: 4,4'-Diaminodiphenyl ether, 98% Product Code: D 1375 CAS No: 101-80-4

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet Company identification OTTO CHEMIE PVT LTD 101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Email info@ottokemi.com

1.4. Emergency telephone number Phone no.: + 91 22 2207 0099 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Acute toxicity, (Category 3) H301: Toxic if swallowed. Acute toxicity, (Category 3) Acute toxicity, (Category 3) H331: Toxic if inhaled. H311: Toxic in contact with skin. Skin sensitization, (Category 1) H317: May cause an allergic skin reaction. Germ cell mutagenicity, H340: May cause genetic defects. (Category 1B) Carcinogenicity, (Category 1B) H350: May cause cancer. H361fd: Suspected of damaging fertility. Reproductive toxicity, (Category Suspected of damaging the unborn child. 2) Specific target organ toxicity -H373: May cause damage to organs repeated exposure, (Category 2), through prolonged or repeated exposure if Thyroid swallowed Long-term (chronic) aquatic H410: Very toxic to aquatic life with long hazard, (Category 1) lasting effects. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Danger Hazard Statements H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. May cause an allergic skin reaction. H317 H340 May cause genetic defects. H350 May cause cancer. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs (Thyroid) through prolonged or repeated exposure if swallowed. Very toxic to aquatic life with long lasting effects. H410 **Precautionary Statements** P202 Do not handle until all safety precautions have been read and understood P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. IF ON SKIN: Wash with plenty of water Call a POISON CENTER/ P302 + P352 + P312 doctor if you feel unwell. P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable

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Supplemental Hazard	for breathing. Call a POISON CENTE none	R/ doctor.		
Statements Restricted to professional users.				
Reduced Labeling (<= 125 ml)				
Pictogram				
Signal Word	Danger			
Hazard Statements				
H317	May cause an allergic skin reaction.			
H340	May cause genetic defects.			
H350	May cause cancer.			
H361fd	Suspected of damaging fertility. Suspected of damaging the			
	unborn child.			
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.			
Precautionary Statements				
P202	Do not handle until all safety precaution	ons have been read and		
	understood.			
P280	Wear protective gloves/ protective clo	thing/ eye protection/ face		
	protection.			
P301 + P310		IF SWALLOWED: Immediately call a POISON CENTER/ doctor.		
P302 + P352 + P312	IF ON SKIN: Wash with plenty of wate	er.Call a POISON CENTER/		
D004 + D040 + D044	doctor if you feel unwell.	the second se		
P304 + P340 + P311	IF INHALED: Remove person to fresh			
Cumplemental Harrand	for breathing. Call a POISON CENTE	R/ doctor.		
Supplemental Hazard Statements	none			
2.3 Other hazards				
This substance/mixture contains no compone	nts considered to be either persistent			
bioaccumulative and toxic (PBT), or very pers				
levels of 0.1% or higher.	sistent and very bloaccumulative (vr vb) at			
Ecological information:				
The substance/mixture does not contain com	ponents considered to have endocrine			
disrupting properties according to REACH Art		ion		
(EU) 2017/2100 or Commission Regulation (E				
Toxicological information:	,			
The substance/mixture does not contain com	ponents considered to have endocrine			
disrupting properties according to REACH Art	icle 57(f) or Commission Delegated regulat	ion		
(EU) 2017/2100 or Commission Regulation (E	EU) 2018/605 at levels of 0.1% or higher.			
SECTION 3: Composition/information on in	ngredients			
3.1 Substances	EST			
Synonyms : 4-Aminophenyl ether				
4,4'-Diaminodiphenyl eth	er			
Formula C12H12N2O				
Molecular weight : 200,24 g/mol				
CAS-No. : 101-80-4				
EC-No. : 202-977-0				
Component	Classification	Concentration		

Component	Classification	Concentration
4,4'-diaminodiphenylether; 4,4'- oxydianiline (ODA) Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 101-80-4 EC-No. 202-977-0	Acute Tox. 3; Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 2; STOT RE 2; Aquatic Chronic 1; H301, H331, H311, H317, H340, H350, H361f, H361fd, H373, H410 M-Factor - Aquatic Chronic: 1	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NOx)

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire

extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area.
Avoid generation of dusts.
6.4 Reference to other sections

For disposal see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling Advice on safe handling Work under hood. Do not inhale substance/mixture. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Storage class Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated **SECTION 8: Exposure controls/personal protection** 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Body Protection protective clothing Respiratory protection Recommended Filter type: Filter A-(P3) The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

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solid

light gray

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range f) Flammability (solid. gas) g) Upper/lower flammability or explosive limits h) Flash point i) Autoignition temperature j) Decomposition temperature k) pH I) Viscosity

m) Water solubility n) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information No data available

SECTION 10: Stability and reactivity 10.1 Reactivity

Forms explosive mixtures with air on intense heating. A range from approx, 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature). 10.3 Possibility of hazardous reactions Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines! Violent reactions possible with: Strong oxidizing agents 10.4 Conditions to avoid Strong heating. 10.5 Incompatible materials No data available 10.6 Hazardous decomposition products In the event of fire: see section 5

DISCLAIMER

odorless Melting point/range: 188 - 192 °C - lit. 396,8 °C at 975 hPa - OECD Test Guideline 103 No data available No data available 219 °C - closed cup > 192 °C - NF T 20-036does not ignite No data available No data available Viscosity, kinematic: No data available Viscosity, dynamic: No data available 0,048 g/l at 20 °C - OECD Test Guideline 105 log Pow: 0,72 - OECD Test Guideline 117 - Bioaccumulation is not expected.

90 hPa at 20 °C - OECD Test Guideline 104 1,315 g/cm3 at 20 °C - OECD Test Guideline 109 1,315 at 20 °C

No data available

No data available none

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SECTION 11: Toxicological information

11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None, by NTP, None, by OSHA, None, by NIOSH, Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available. **SECTION 12: Ecological information** 12.1 Toxicity Toxicity to fish semi-static test LC50 - Pimephales promelas (fathead minnow) - 22 mg/l - 96 h (US-EPA) Remarks: The value is given in analogy to the following substances: 3,4'-OxydianilineThe value is given in analogy to the following substances: 4,4'-diaminodiphenylether; 4,4'-oxydianiline (ODA) Toxicity to daphnia and other aquatic invertebrates static test LC50 - Daphnia magna (Water flea) - 0,92 mg/l - 48 h (US-EPA) Toxicity to algae static test ErC50 - Selenastrum capricornutum (green algae) - 21,7 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209) Toxicity to fish(Chronic toxicity) semi-static test NOEC - Pimephales promelas (fathead minnow) - 5 mg/l - 7 d (US-EPA) Remarks: The value is given in analogy to the following substances: 3.4'-Oxvdianiline Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Ceriodaphnia dubia (water flea) - 0,018 mg/l - 7 d (US-EPA) Remarks: The value is given in analogy to the following substances: 3,4'-Oxydianiline 12.2 Persistence and degradability Biodegradability aerobic - Exposure time 28 d Result: 7,6 % - Not biodegradable (OECD Test Guideline 301D) 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent. bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Endocrine disrupting properties Product[.] Assessment : The substance/mixture does not contain components

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considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 12.7 Other adverse effects

Avoid release to the environment.

SECTION 13: Disposal considerations 13.1 Waste treatment methods

13.1	l Wa	ste	treat	ment	metl
No	data	ava	ilabl	е	

SECTION 14: Transport information 14.1 UN number

ADR/RID: 2811		IMDG: 2811	IATA: 2811			
	4.2 UN proper shipping name					
ADR/RID		N.O.S. (4,4'-diaminodiphenylether; 4,4'-o	oxydianiline			
	(ODA))		Ayukumino			
IMDG		N.O.S. (4,4'-diaminodiphenylether; 4,4'-o	xvdianiline			
	(ODA))					
IATA		1,4'-diaminodiphenylether; 4,4'-oxydianili	ine (ODA))			
14.3 Transport haza		.,				
ADR/RID: 6.1	()	IMDG: 6.1	IATA: 6.1			
14.4 Packaging gro	up					
ADR/RID: III	•	IMDG: III				
14.5 Environmental	hazards					
ADR/RID: yes		IMDG Marine pollutant: yes	IATA: no			
14.6 Special precau	itions for user					
Tunnel restriction co						
Further information	: No data	available				
SECTION 15: Regu	latory information					
15.1 Safety, health and environmental regulations/legislation specific for the						
substance or mixture						
This material safety	data sheet complies with the	requirements of Regulation (EC) No.				
1907/2006.						
Authorisations and/or restrictions on use						
REACH - Candidate List of Substances of Very : 4,4'-diaminodiphenylether; 4,4'-						
High Concern for Authorisation (Article 59). oxydianiline (ODA)						
REACH - Restrictions on the manufacture,						
	et and use of certain					
dangerous substances, mixtures and articles						
(Annex XVII)						
: 4,4'-diaminodiphenylether; 4,4'-						
oxydianiline (ODA)						
National legislation						
Seveso III: Directive 2012/18/EU of the						
European Parliament and of the Council						
on the control of major-accident hazards						
involving dangerous	s substances.					
H2 ACUTE TOXIC						
E1 ENVIRONMENTAL HAZARDS						
Other regulations		hastian in assentance to Din 00/05/550				
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or						
stricter national regulations where applicable.						
Take note of Dir 94/33/EC on the protection of young people at work.						
15.2 Chemical Safety Assessment						
For this product a chemical safety assessment was not carried out						

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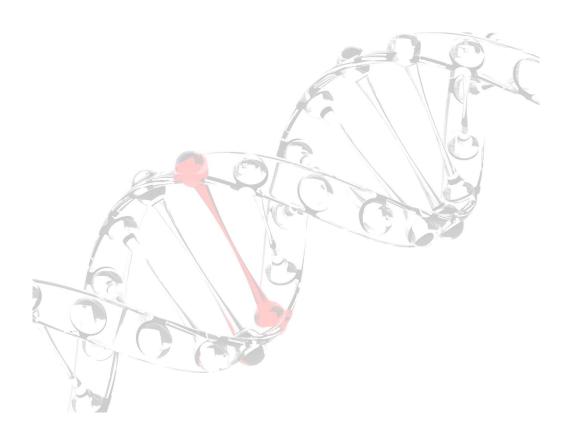
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Section 16: Other Information

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 fulfill his obligations regarding the use of hazardous products.



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