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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name : PEDOT:PSS Product Code: P 3666 CAS-No.: 155090-83-8

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 <u>info@ottokemi.com</u>

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 Classification according to Regulation (EC) No 1272/2008 Skin corrosion (Category 1), H314 Serious eye damage (Category 1), H318 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Danger Hazard statement(s) H314 Causes severe skin burns and eye damage. Precautionary statement(s) P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable P304 + P340 + P310 for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P363 Wash contaminated clothing before reuse. P405 Store locked up. Supplemental Hazard none Statements

2.3 Other hazards

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : Poly(2,3-dihydrothieno-1,4-dioxin)-poly(styrenesulfonate) PEDOT/PSS

Component	Classification	Concentration
ethylene glycol		
CAS-No. 107-21-1	Acute Tox. 4; STOT RE 2;	>= 1 - < 10 %
EC-No. 203-473-3	H302, H373	
Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-		

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dihydrothieno[3,4-				
b]-1,4-dioxin homopolymer				
CAS-No. 155090-83-8	Skin Corr. 1B; Eye Dam.	>= 3 - < 5 %		
EC-No. 629-200-1	1; H314, H318			
*A registration number is not available for this substance as the substa				
exempted from registration according to Article 2 REACH Regulation (
the annual tonnage does not require a registration or the registration is				
later registration deadline.				
For the full text of the H-Statements mentioned in this Section, see Se	ction 16.			
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	a sheet to the doctor			
in attendance.				
If inhaled				
After inhalation: fresh air. Call in physician.		CON -		
In case of skin contact	Discussion			
In case of skin contact: Take off immediately all contaminated clothing	. Rinse skin with			
water/ shower. Call a physician immediately.		AL A		
In case of eye contact	hthelmologist			
After eye contact: rinse out with plenty of water. Immediately call in op Remove contact lenses.	ntriaimologist.			
If swallowed		1		
After swallowing: make victim drink water (two glasses at most), avoid	vomiting (risk of			
perforation). Call a physician immediately. Do not attempt to neutralise				
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				
Use extinguishing measures that are appropriate to local circumstance	es and the			
surrounding environment.				
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 Sulfur oxides				
Not combustible.				
Ambient fire may liberate hazardous vapours.				
5.3 Advice for firefighters				
Stay in danger area only with self-contained breathing apparatus. Prev	ent skin contact by			
keeping a safe distance or by wearing suitable protective clothing.	one on of official by			
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 w				
SECTION 6: Accidental release measures				
6.1 Personal precautions, protective equipment and emergency proce				
Advice for non-emergency personnel: Do not breathe vapors, aerosols. 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				

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions

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(see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area. 6.4 Reference to other sections For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Storage stability Recommended storage temperature 2 - 8 °C Storage class Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials 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). Tightly fitting safety goggles Skin protection required Body Protection Acid-resistant protective clothing Respiratory protection required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

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.
- Do not let product enter drail

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	liquid
b) Color	No data available
c) Odor	No data available
d) Melting	No data available
point/freezing point	
e) Initial boiling point	No data available
and boiling range	
f) Flammability (solid,	No data available
gas)	
g) Upper/lower	No data available
flammability or	
explosive limits	
h) Flash point	> 100 °C
i) Autoignition	Not applicable

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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 vapour density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information No data available No data available

2 at 20 °C Viscosity, kinematic: No data available Viscosity, dynamic: No data available at 20 °C soluble No data available

No data available 1 g/mL at 20 °C No data available No data available

No data available

Not classified as explosive. none

SECTION 10: Stability and reactivity

10.1 Reactivity No data available 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) . 10.3 Possibility of hazardous reactions Violent reactions possible with: The generally known reaction partners of water. 10.4 Conditions to avoid no information available 10.5 Incompatible materials No data available 10.6 Hazardous decomposition products In the event of fire: see section 5

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 other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

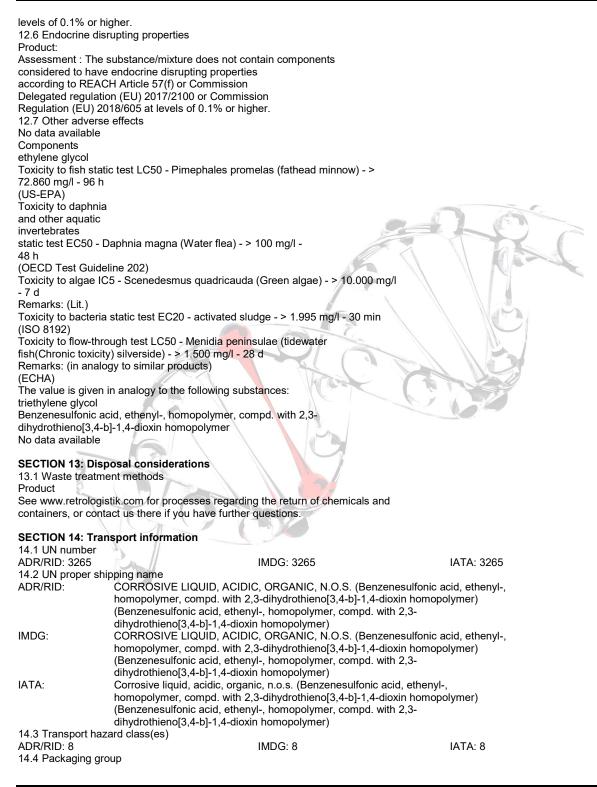
12.1 Toxicity Mixture No data available 12.2 Persistence and degradability No data available 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at

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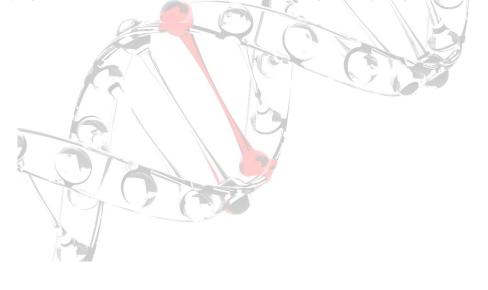
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ADR/RID: III 14.5 Environmental hazards ADR/RID: no 14.6 Special precautions for user Tunnel restriction code : (E) Further information : No data available	IMDG: III IMDG Marine pollutant: no	IATA: III IATA: no		
SECTION 15: Regulatory information 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. Other regulations 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

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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Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product