

Material Safety Data Sheet

TEST PEN

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4. First aid measures		
First Aid Procedures		
4.1	Inhalation:	Remove the casualty into fresh air and keep calm. In the event of symptoms take medical treatment.
4.2	Eye contact:	In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.
4.3	Skin contact:	Flush skin with plenty of water. Remove contaminated clothing. Obtain medical attention if irritation develops or persists.
4.4	Ingestion:	Do not include vomiting. Summon a doctor immediately.
5. Fire-fighting measures		
5.1	Flash point:	105°C (DIN 51758) 221°F (Pensky Martens Closed Cup)
5.2	Ignition temperature	387°C (DIN 51794) 728°F (DIN 51794)
5.3	Autoignition Temperature	Not available
5.4	Lower explosion limit	1
5.5	Upper explosion limit	9,1
5.6	OSHA Flammability Classification	None
5.7	Extinguishing Media	Use the following extinguishing media when fighting fires involving this material: foam-dry, chemical-carbon dioxide, foam, water spray
5.8	Fire Fighting Procedures	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.
6. Accidental release measures		
6.1	Procedures:	Ventilate area. Absorb spill with binding material (e.g. sawdust, sand, universal binder) and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. Use personal protective equipment. See section 8. Exposure Controls/Personal Protection. After removal, flush contaminated area with water and collect for disposal.
7. Handling and storage		
7.1	Handling:	Ensure adequate ventilation, avoid contact with eye, skin and clothing
7.2	Storage:	Keep in the original container at a temperature not exceeding 30°C (86°F). Store in a cool, dry place. Do not store in direct sunlight. Keep container closed when not in use. Do not apply heat, cut, drill, grind or weld on or near this container.

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8. Exposure controls / personal protection				
8.1	Exposure Limit Information	2-Methyl-2,4-pentandiol CAS No. 107-41-5	There are no Occupational Exposure Values established (ACGIH, OSHA, Canada and Mexico).	
8.2	Engineering Controls (Ventilation)	Use adequate ventilation.		
8.3	Respiratory Protection	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's „Respirator Decision Logic“ may be useful in determining the suitability of various types of respirators.		
8.4	Eye Protection	Use chemical splash goggles.		
8.5	Skin Protection	On handling of larger quantities: face mask, chemical-resistant boots and apron		
8.6	Hand protection:	Impermeable gloves; Gloves should be replaced regularly, especially after extended contact with the product. For each work –place a suitable glove type has to be selected.		
8.7	Other Protective Equipment	A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.		
9. Physical and chemical properties				
9.1	Appearance:	clear		
9.2	Physical state:	Liquid		
9.3	Odor:	ester-like		
9.4	Flash point	105 221	°C °F	DIN 51758 Pensky Martens Closed Cup
9.5	pH-value [20° C]	20° C/ 68° F	Not defined	
9.6	Viscosity (dynamic)	23° C	Not defined	mPa·s
9.7	Specific gravity (Water = 1)	25° C	Not defined	g/cm³
9.8	Vapor density (air = 1)	Is heavier than air		
9.9	Vapor pressure	20° C / 68° F	6,0	Pa (=mbar)
9.10	Melting temperature	-36° C / -32,8° F		
9.11	Boiling temperature	1013 hPa (mbar)	approx. 174 approx. 345	°C °F
9.12	Solubility in water	20° C	Full soluble	g/l
10. Stability and reactivity				
10.1	Stability	This product is stable under normal storage conditions.		
10.2	Conditions to Avoid	See „Hazardous Polymerization“ for conditions to avoid		
10.3	Incompatibility with other materials	Reactions with strong oxidizing agents and strong acids		
10.4	Hazardous decomposition products	CO and CO₂.		
10.5	Hazardous polymerization	Will not happen		

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11. Toxicological information	
11.1 Acute toxicity:	Acute oral toxicity: LD50 / rat: > 4000 mg/kg. Acute dermal toxicity: LD50 / rabbit: >13000 mg/kg
11.2 Irritant effect	On the skin Rabbit, 24 h, FDA 1959 Draize, occlusive: not irritating On the eyes Rabbit: not irritating - irritating
11.3 Sensitization	Guinea pig In animal experiments the substance shows low resp. No ability as a sensitizer. There are indications of a sensitizing effect of the substance in man.
11.4 Toxicity on Repeated Administration	Rat, inhalational, 3w, 0.5 mg/l, tested in a saturated atmosphere: NOAEL 0.5 mg/l Rat, oral, 49d, 0, 30, 100, 300, 1000 mg/kg: NOAEL 300mg/kg
11.5 Mutagenicity	Positive as well as negative results in in vitro mutagenicity/genotoxicity tests. No experimental indication of genotoxicity in vivo available. In summary not mutagenic according to internationally accepted criteria.
11.6 Reprotoxicity	No indications of toxic effects were observed in reproduction studies in animals. Source: literature
11.7 Further information on	Avoid contact with the skin eyes and inhalation of the product vapors.
12. Ecological information	
12.1 Information on Elimination (Persistence and Degradability)	Biodegradability >70%
12.2 Ecotoxicological Effect	Fish toxicity: LC50 Leuciscus idus, DIN 38412 section 15, 48h: 10000 mg/l Further information on Ecology: Do not allow to enter soil, waterways or waste water.
13. Disposal consideration	
13.1 Procedures	Waste must be disposed of in accordance with federal, state and local regulation is the preferred method
14. Transport information	
14.1 US DOT Hazard Classification	Not subject to the regulations on dangerous goods.
14.2 Canadian TDG Classification	Refer to the classification US DOT
14.3 Shipment by sea	Not subject to the regulations on dangerous goods.
14.4 Air transport	Not subject to the regulations on dangerous goods.

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15. Regulatory information							
15.1	INVENTORY INFORMATION	EC EINECS	Listed				
		USA TSCA	Listed				
		Canada DSL	Listed				
		Australia AICS	Listed				
		Japan MITI	Listed				
		South Korea ECL	Listed				
		Philippines	Listed				
		PICCS	Listed				
		China					
15.2	US FEDERAL REGULATORY INFORMATION	Component / CASRN	TPQ (lbs)	CERCLARQ (lbs) (40CFR302.4)	SARA 302 List of EHS	SARA 313 (40CFR372)	TSCA 12b
		2-Methyl-2,4pentandiol / 107-41-5	NONE	NONE	NO	NO	NO
15.3	COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112						
	Component / CASRN	Weight %	HAP		EHP		
	NONE						
15.4	PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370): ACUTE						
15.5	US STATE REGULATORY INFORMATION						
	Component / CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Proposition 65 Cancer	California Proposition 65 Reproductive	
	2-Methyl-2,4pentandiol / 107-41-5	NO	NO	NO	NO	NO	
16. Other information							
		Health		Flammability		Physical Hazard	
	HMIS-Ratings	2		1		1	
	NFPA-Ratings	2		1		0	
		HMIS Hazard Ratings		NFPA Hazard Ratings			
		4 = severe		4 = extreme			
		3 = serious		3 = high			
		2 = moderate		2 = moderate			
		1 = slight		1 = slight			
		0= minimal		0= insignificant			
		N = no rating for powders		N = no rating for powders			
		* = chronic health hazard					