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ISO 9001: 2015

MATERIAL SAFETY DATA SHEET

1. Identification

Product Name Pentaerythritol

Pentaerythritol, 99%

Code P 1395

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

Signal Word

Warning

Hazard Statements

May form combustible dust concentrations in air

Precautionary Statements

Storage

Store in a well-ventilated place. Keep container tightly closed

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Pentaerythritol	115-77-5	98

4. First-aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Do not rub affected area.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes

Inhalation Remove from exposure, lie down. Remove to fresh air

Ingestion Never give anything by mouth to an unconscious person. Call a physician or poison control

center immediately. Clean mouth with water.

Most important symptoms and effects

No information available. Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Unsuitable Extinguishing Media No information available

Flash Point 240 °C / 464 °F

Method - No information available

Autoignition Temperature 490 °C / 914 °F

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Dust can form an explosive mixture with air. Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required See Section 12 for additional Ecological Information.

Methods for Containment and Clean

Up

Sweep up and shovel into suitable containers for disposal. Use spark-proof tools and explosion-proof equipment. Provide adequate ventilation.

7. Handling and storage

Handling Avoid contact with skin and eyes. Do not breathe dust.

Storage Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed

8. Exposure controls / personal protection

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Pentaerythritol	TWA: 10 mg/m3	(Vacated) TWA: 10 mg/m3 (Vacated) TWA: 5 mg/m3 TWA: 5 mg/m3 TWA: 10 mg/m3	TWA: 15 mg/m3 TWA: 5 mg/m3	TWA: 10 mg/m3

ACGIH - American Conference of Governmental Industrial Hygienists
 OSHA - Occupational Safety and Health Administration
 NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health
 Engineering Measures None under normal use conditions

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection No protective equipment is needed under normal use conditions

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	257 - 264 °C / 494.6 - 507.2 °F
Boiling Point/Range	276 °C / 528.8 °F @ 30 mmHg
Flash Point	240 °C / 464 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	1 mmHg @ 20 °C
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature 490 °C / 914 °F	
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C5 H12 O4
Molecular Weight	136.15

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions. Hygroscopic. Moisture sensitive. Conditions to Avoid Excess heat. Incompatible products.

Incompatible Materials Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO2)

Hazardous Polymerization Hazardous polymerization does not occur. Hazardous Reactions None under normal processing

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pentaerythritol	LD50 = 19500 mg/kg (Rat)	Not listed LC50 > 11 g/m3	(Rat) 6 h

Toxicologically Synergistic

Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Pentaerythritol	115-77-5	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known
 Aspiration hazard No information available
 Symptoms / effects, both acute and No information available
 Endocrine Disruptor Information No information available
 Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Pentaerythritol	Not listed	LC50: = 50000 mg/L, 48h		Not listed EC50: = 38900
mg/L, 24h			semi-static (Oryzias latipes)	EC50:
30477 - 37043 mg/L,			LC50: > 100 mg/L, 96h	48h Static
(Daphnia magna) LC50: > 100 mg/L, 96h			semi-static (Oryzias latipes)	(Daphnia magna)

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.
 Bioaccumulation/ Accumulation No information available
 Mobility Will likely be mobile in the environment due to its water solubility

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. Transport information

DOT Not regulated
 TDG Not regulated
 IATA Not regulated
 IMDG/IMO Not regulated

15. Regulatory information

United States of America Inventory	CAS-No	TSCA	TSCA Inventory notification -	TSCA - EPA
Component			Active/Inactive	
Regulatory				
Flags				
Pentaerythritol	115-77-5	X	ACTIVE	

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Pentaerythritol	115-77-5	X	-	204-104-9	X	X	X	X	KE-03218

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals. Other International Regulations

Mexico - Grade No information available

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.

