



GLOBAL AUTHORITY ON PHASE CHANGE MATERIAL

Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Product name: PureTemp -15
Product number: 191520200

Recommended use: Thermal energy storage.

Company information: Entropy Solutions, LLC.
151 Cheshire Lane N., Suite 400
Plymouth, MN 55441
952-941-0306

Emergency contact: Call CHEMTREC Day or Night
1-800-424-9300 (USA)
+1 703-527-3887 (International)

Section 2 – Hazards Identification

GHS classification: Acute toxicity (Category 4), H302
Eye Irritation (Category 2), H318

GHS label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): H302, Harmful if swallowed
H318, Causes serious eye damage

Precautionary statement(s):

P273, Avoid release to the environment
P280, Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338, IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313, If eye irritation persists: Get medical advice/attention.
P391, Collect spillage
P403 + P233, Store in well-ventilated place. Keep container tightly closed.
P501, Dispose of contents/container to an approved waste disposal plant

Section 3 – Composition/Information on Ingredients

CAS #	Component
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Trade Secret	Proprietary Component 1
Trade Secret	Proprietary Component 2

PureTemp -15 Variants: PureTemp -15X Purple (191520205, unnucleated)

Section 4 – First Aid Measures

Description of first aid measures

Inhalation:	If breathed in, move person to fresh air. If breathing is affected seek medical attention.
Skin contact:	Wash immediately with soap and water. Cover irritated skin with an emollient. If irritation persists, get medical attention.
Eye contact:	Immediately flush eyes with large amounts of water, continuing to flush for 15 minutes. If irritation persists, get medical attention.
Ingestion:	Do not induce vomiting. Drink large amounts of water. Seek medical attention.

Most important symptoms and effects, both acute and delayed:

Will cause eye irritation. May cause gastrointestinal irritation.

Indication of any immediate medical attention and special treatment needed:

No data available

Section 5 – Firefighting Measures

Extinguishing media

Suitable:	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable:	No data available.

Special hazards: Carbon oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting, if necessary.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Eliminate all ignition sources. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage, if safe to do so. Do not let product enter drains. Discharge into the environment should be avoided.

Methods and materials for containment and clean up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

Precautions for safe handling:	Avoid contact with eyes. Wash thoroughly after handling. Material is slowly corrosive to metal.
Conditions for safe storage:	Keep the container tightly closed and in a cool, well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section 8 – Exposure Controls and Personal Protection

Control parameters:	Proprietary Component 2
ACGIH:	10 mg/m ³ TWA (fume) 20 mg/m ³ STEL (fume)
OSHA:	10 mg/m ³ TWA 20 mg/m ³ STEL
NIOSH:	10 mg/m ³ TWA (fume) 20 mg/m ³ STEL (fume)
Engineering controls:	Handle in accordance with good industrial hygiene and safety practices. Use appropriate ventilation.

Personal protective equipment

Eyes/face:	Use equipment for eye protection tested and approved under appropriate government standards, such as NIOSH (US) or EN 166 (EU).
Skin:	Use impervious gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of the contaminated gloves in an appropriate manner. Wash and dry hands.
Body:	Wear impervious clothing.
Respiratory:	Respiratory equipment is not required.
General	Eye wash fountain and emergency showers are recommended.

Section 9 – Physical and Chemical Properties

Physical state:	Liquid/solid.
Appearance:	Clear liquid. White solid.
Odor:	None.
Odor threshold:	No data available.
pH:	No data available.

Melting point:	-15 °C (5 °F)
Boiling point:	101 °C (214 °F)
Flash point:	No data available
Evaporation rate:	No data available.
Flammability (solid/gas):	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapor pressure:	717.40 mmHg at 25 °C (77 °F)
Vapor density:	No data available.
Relative density:	1.033 kg/L
Water solubility:	>10,000 mg/L at 20 °C (68 °F)
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

Section 10 – Stability and Reactivity

Reactivity:	No data available.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	No data available.
Incompatible materials:	Strong oxidizing agents, alkalis, potassium chlorate
Hazardous decomposition products:	Ammonia, hydrogen chloride

Section 11 – Toxicological Information

Acute toxicity	Proprietary Component 1	Proprietary Component 2
LD50 Oral – Rat:	> 90 ml/kg	1410 mg/kg
LC50 Inhalation – Rat:	No data available.	No data available.

LD50 Dermal - Rabbit:	No data available.	No data available.
Carcinogenicity:	None of this product's components are identified as probable, possible, or confirmed carcinogens by ACGIH, IARC, OSHA, NIOSH, or NTP.	
Skin corrosion/irritation:	Skin- rabbit. No skin irritation.	
Eye irritation:	Eyes- rabbit. Eye irritation occurred. (Proprietary Component 2)	
Respiratory or skin sensitization:	No data available.	

Section 12 – Ecological Information

Toxicity	Proprietary Component 2
Fish:	LC50 – Cyprinus carpo – 209 mg/L – 96 h
Daphnia and other aquatic invertebrates:	LC50 – Daphnia magna – 271 mg/L – 48 h
Persistence	
Biodegradability:	No data available.
Bioaccumulative potential:	No data available.
Mobility in soil:	No data available.

Section 13 – Disposal Considerations

Disposal instructions:	All wastes must be handled in accordance with local, state, and federal regulations.
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Section 14 – Transportation Information

DOT (US):	Not dangerous goods.
IMDG:	Not dangerous goods.
IATA:	Not dangerous goods.

Section 15 – Regulatory Information

SARA Title III:	One or more of this product's components are subject to the reporting requirements in SARA Title III, Section 302, Section 311, Section 312, and/or Section 313.
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Proprietary Component 2 (Trade Secret)

CERCLA: 5,000 lb final RQ; 2,270 kg final RQ

State regulations:	The following components appear on one or more of the following
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state hazardous substances lists.

Component	CAS	CA	MA	MN	NJ	PA	RI
Proprietary Component 2	Trade Secret	Yes	Yes	Yes	Yes	Yes	Yes

WHMIS IDL: The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List.

Component	CAS	Minimum Concentration
Proprietary Component 2	Trade Secret	1%

Additional Regulatory Information
Component Analysis - Inventory:

Component	CAS	TSCA	CAN	EEC
Proprietary Component 1	Trade Secret	Yes	DSL	EINECS
Proprietary Component 2	Trade Secret	Yes	DSL	EINECS

Section 16 – Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. Entropy Solutions, LLC. shall not be held liable for any damage resulting from handling, or from contact, with the specified product. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.