

Thermal EG

Version: 1.1

Reviewed on 0.08.2011

T-Nr.: 1.990.0060

Print date: 03.08.11

1. Identification of the substance/preparation and of the company

Product details

Name Used on Label : **Thermal EG**
 Order-No. (5 Liter) : 8891407
 Order-No. (10 Liter) : 8891406

Company : JULABO U.S.A., INC
 Manufactured for: 884 Marcon Blvd
 ALLENTOWN, PA 18109 / U.S.A.

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Emergency Information : CHEMTREC 1-800-424-9300
 Trade name :

Application : Bath fluid for laboratory circulators

2. Composition/information on ingredients

Identity	CAS #	%	TLV OSHA PEL
Ethylene glycol	107-21-1	90-95	Not established
Sodium tetraborate decahydrate	1303-96-4	1-5	Not established

Synonyms: none

HMIS CODES: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 Personal Protection: D

3. Physical and chemical properties

Boiling Point: 170 °C @ 1.013 bar, ASTM D 1120
 Density: 1.14 g/cm³ (20 °C), DIN 51757
 Vapor Density (air = 1): <0.08 Torr (20 °C)
 % Volatiles: NA
 Molecular Weight: 310-458
 pH: 8-9 (20 °C, 300 g/L), method DIN EN 1262
 Appearance & Color: Yellow, nearly odorless liquid.

Pour Point: -70 °C, DIN 51583
 Vapor Pressure: <1mmHg
 Solubility in water: miscible in all proportions (20 °C)
 Evaporation rate: NA
 Viscosity, kinematic: 26-29 mm²/s (20 °C)
 Product is hygroscopic.

Viscosity values when diluted to 50% with water

Temp (°C)	-30	-10	20	40	80
Viscosity, mm ² /s (cps)	71.54	15.32	4.25	2.38	1.08

4. Fire and Explosion Hazard Data

Flash Point, Closed Cup: 120°C (248°F)
 Flammability Limits- LEL: 3% (V)
 Self Ignition: not self-igniting

Ignition Temp: 410°C (770°F); method DIN 51794
 UEL: NA

Extinguishing Media: Water spray jet, alcohol-resistant foam, carbon dioxide, dry chemical
 Special Fire Fighting Procedures: Wear positive pressure self-contained breathing apparatus (SCBA) and full protective equipment. Do not breathe fumes or inhale vapors.
 Unusual Fire and Explosion Hazards: None known.

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5. Stability and reactivity

Chemical Stability:	Stable
Conditions to avoid:	Combustible. Store away from oxidizers.
Thermal decomposition:	260 °C, DSC
Hazardous polymerization:	Will not occur.
Conditions to avoid:	None known.

6. Health Hazard Data

Eye Contact:	May cause eye irritation.
Skin contact:	May cause skin irritation.
Inhalation:	Inhalation of vapors or particulates will irritate the respiratory tract.
Oral Toxicity:	Harmful if swallowed.
Target organs:	Liver, cardiovascular system, eyes, kidney, central nervous system.
Listed carcinogen:	IARC: No NTP: No OSHA: No Other: No

SUGGESTED FIRST AID

- **EYES:** In case of contact, immediately flush eyes with flowing water for at least 15 minutes occasionally lifting the upper and lower eyelids. Get medical attention if redness or irritation occurs.
- **SKIN:** Flush with water, and then wash with soap and water. Remove contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if redness or irritation occurs.
- **INHALATION:** Move exposed individual to fresh air. Call a physician. Give artificial respiration or oxygen if breathing has stopped. Do not give fluids if victim is unconscious.
- **INGESTION:** Induce vomiting by giving large quantities of water and (a) stimulating back of throat with finger, or (b) giving syrup of ipecac, 1 oz. Never give anything by mouth or induce vomiting to an unconscious victim. Get medical attention immediately.

Acute Oral Toxicity:	LD50 4,000 mg/kg (rat), IUCLID
Skin irritation:	non-irritating (rabbit)
Eye irritation:	slightly irritating (rabbit)

7. Precautions for Safe Handling and Use

Avoid getting on skin or in eyes. Keep containers closed.

Spill response: May be hazardous to aquatic life if released to open waters. Wear appropriate personal protective equipment, contain spill, and collect onto inert absorbent. Transfer to a suitable container for disposal.

Recommended Disposal: May be incinerated. Alternately, absorb onto clay or vermiculite and dispose of absorbent material as solid waste. Follow all chemical pollution control regulations.

8. Protection and Precautions

Ventilation:	Local ventilation suggested. Mechanical is recommended.
Respiratory Protection:	If exposure exceeds recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134.
Eye and Face Protection:	Chemical worker's goggles. Do not wear contact lenses.
Other Clothing and Equipment:	Butyl rubber or PVC gloves. An eyewash and emergency shower should be available. Launder clothing before reuse.

For research and industrial use only.

Storage and Handling: Store in sealed containers. Hygroscopic.

Containers require grounding during use.

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Component	CAS #	Regulatory list	Type of value	Value 1	Value 2
Ethylene glycol	107-21-1	US OSHA Table Z-1-A Data	Ceiling limit Value	50 ppm	125 mg/m ³
Ethylene glycol, aerosol only	107-21-1	US ACGIH Threshold limit Values Data	Ceiling limit Value		100 mg/m ³
Borates, tetra, sodium salts-decahydrate	1303-96-4	US OSHA Table Z-1-A Data	Time Weighted Average (TWA)		10 mg/m ³
Borate compounds, inorganic, inhalable fraction	1303-96-4	US ACGIH Threshold limit Values Data	Time Weighted Average (TWA)		2 mg/m ³
Borate compounds, inorganic, inhalable fraction	1303-96-4	US ACGIH Threshold limit Values Data	Short Term Exposure Limit (STEL)		6 mg/m ³

9. Department of Transportation Data

DOT: not restricted
 IATA: not dangerous goods
 IMDG: not dangerous goods

10. Other information

TSCA Status: All components of this product are listed on the TSCA Inventory.

SARA (section 311/312):

Reactive hazard: no Immediate/acute: yes
 Pressure hazard: no Delayed/chronic: yes
 Fire hazard: no

SARA 313 information:

This product contains toxic chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372. Any such toxic chemical(s) are shown below. This information must be included in all MSDS's that are copied and distributed for this material.

Component	CAS #	Concentration
Ethylene glycol	107-21-1	90-95 %

Clean Water Act: Contains no known priority pollutants at concentrations greater than 0.1%.

Volatile organic compounds VOC: Not available

CERCLA information:

Component	CAS #	Percentage	RQ
Ethylene glycol	107-21-1	90-95%	5,000 lbs

FDA: This product is not registered with the FDA.

California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

DISCLAIMER

The information contained in this document has been gathered from reference materials and/or test data and is to the best knowledge and belief of Julabo USA, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones that exist. Julabo USA, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore.

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Julabo USA, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.