


MATERIAL SAFETY DATA SHEET
THERMALCOTE II

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION								
PRODUCT NAME: THERMALCOTE II PRODUCT DESCRIPTION: Blue paste, mild characteristic odor GENERAL USE: Heat transfer compound				 AAVID THERMALLOY				
MANUFACTURER'S NAME Aavid Thermalloy, LLC.		DATE PREPARED: July 12, 2010 SUPERSEDES: February 10, 2005						
ADDRESS (NUMBER, STREET, P.O. BOX) 80 Commercial St.		TELEPHONE NUMBER FOR INFORMATION (603) 527-2292						
(CITY, STATE AND ZIP CODE) COUNTRY Concord, NH 03301 USA		EMERGENCY TELEPHONE NUMBER ChemTel Inc. 1- (800) 255-3924 Intl. + 01 (813) 248-0585						
DISTRIBUTOR'S NAME Information is Same As Above								
ADDRESS (NUMBER, STREET, P.O. BOX)		TELEPHONE NUMBER FOR INFORMATION						
(CITY, STATE AND ZIP CODE) COUNTRY		EMERGENCY TELEPHONE NUMBER						
SECTION 2 - HAZARDOUS INGREDIENTS								
HAZARDOUS COMPONENTS	CAS #	% (by weight)	OSHA PEL		ACGIH TWA		SARA TITLE III	RQ LBS
			PPM	MG/M3	PPM	MG/M3		
Zinc oxide (as zinc) (a)	1314-13-2	60 - 80		15		10	Yes	
Tricresyl phosphate (b)	1330-78-5	0.5 - 1.0	not established		not established			
Pentaerythritol ester of heptanoic, caprylic, capric and isononanoic acids	118685-24-8	10 - 30	not established		not established			
Dipentaerythritol ester of heptanoic, caprylic, capric and isononanoic acids	118685-22-6	10 - 30	not established		not established			
Silicon dioxide, amorphous	112945-52-5	1 - 5		6				
(a) See Section 15								
(b) Product is listed or defined as a marine pollutant in IMDG Code or 49 CFR 172.101 Appendix B, List of Marine Pollutants.								
SECTION 3 - HAZARDS IDENTIFICATION								
EMERGENCY OVERVIEW								
Blue paste, ingestion may cause gastric distress. Exposing product to extreme heat (> 400° F, 204° C) may generate irritating fume.								
POTENTIAL HEALTH EFFECTS								
INHALATION: None expected, however, certain individuals may experience minor nausea or headaches. Breathing mists or fume may cause irritation to respiratory tract.								
SKIN: None expected, however, prolonged contact may cause irritation.								
EYES: Contact with eyes may cause irritation.								
INGESTION: May cause gastric distress, vomiting and diarrhea.								
CARCINOGENICITY: NTP? - No California Proposition 65? - No			OSHA REGULATED? - No ESIS? - No		IARC MONOGRAPHS? - No			

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SECTION 4 - FIRST AID MEASURES		
INHALATION: Remove affected person to fresh air; if symptoms persist seek medical attention.		
SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.		
EYES: Remove contact lenses. Flush eyes with water for 15 minutes; if irritation persists, seek medical attention.		
INGESTION: Give two glasses of water for dilution; DO NOT induce vomiting; never give anything by mouth to an unconscious person; seek medical attention.		
SECTION 5 - FIRE FIGHTING MEASURES		
FLASH POINT (METHOD USED): >500° F (>260° C) Cleveland open cup ASTM-D-92	FLAMMABLE LIMITS: LEL: Not applicable, UEL: Not applicable	
	AUTOIGNITION TEMPERATURE: Not determined	NFPA CLASS: IIIB
GENERAL HAZARDS: Product will support combustion. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.		
EXTINGUISHING MEDIA: Carbon dioxide, water fog, dry chemical, chemical foam		
FIRE FIGHTING PROCEDURES: Firefighters must wear full facepiece self - contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire - exposed containers cool.		
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material will support combustion!		
HAZARDOUS COMBUSTION PRODUCTS: Smoke, fumes, oxides of carbon and zinc		
SECTION 6 - ENVIRONMENTAL RELEASE MEASURES		
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WILL SUPPORT COMBUSTION. Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; refer to SARA Title III, Section 313 40 CFR 372 for details concerning reporting requirements.		
SECTION 7 - HANDLING AND STORAGE		
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures, open flames. CAUTION - This material will support combustion. Keep this and other chemicals out of reach of children.		

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION	
ENGINEERING CONTROLS	
The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment. See Section 2 for Component Exposure Guidelines.	
PERSONAL PROTECTION:	
RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH approved respirator designed to remove airborne mists or fume present in excess of maximum allowable concentrations if user operations generate a mist or fume. Refer to 29 CFR 1910.134 or European Standard EN 149 for regulations.	
PROTECTIVE GLOVES: Recommended for general protection	
EYE PROTECTION: Recommended for general protection	
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyebath nearby	
WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.	
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES	
VAPOR PRESSURE (MM Hg) Not determined	VAPOR DENSITY (AIR = 1) Not determined
SPECIFIC GRAVITY (WATER = 1) 3.200	EVAPORATION RATE (WATER = 1) Not determined
SOLUBILITY IN WATER Negligible	FREEZING POINT Not determined
pH Not determined	APPEARANCE AND ODOR Blue paste, mild characteristic odor
BOILING POINT > 500° F (> 260° C)	PHYSICAL STATE Paste
VISCOSITY Not determined	VOLATILE ORGANIC COMPOUNDS (Total VOC's) None
SECTION 10 - STABILITY AND REACTIVITY	
STABILITY : Stable at normal temperatures.	CONDITIONS TO AVOID: Extreme temperatures > 400° F (204° C), open flames
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, zinc and silicone, hydrocarbons, fumes, and smoke may be produced.	
HAZARDOUS POLYMERIZATION: Will not occur	CONDITIONS TO AVOID: None related to hazardous polymerization.

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SECTION 11 - TOXICOLOGICAL INFORMATION				
Hazardous Ingredients	CAS #	EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Zinc oxide (as zinc) (a)	1314-13-2	215-222-5	7950 mg / kg Oral - mouse	2500 mg / m3 Inhalation - mouse
Tricresyl phosphate (b)	1330-78-5	215-548-8	5190 mg / kg Oral - rat	Not established
Pentaerythritol ester of heptanoic, caprylic, capric and isononanoic acids	118685-24-8	Not found	Not established	Not established
Dipentaerythritol ester of heptanoic, caprylic, capric and isononanoic acids	118685-22-6	Not found	Not established	Not established
Silicon dioxide, amorphous	112945-52-5	Not found	3160 mg / kg Oral - rat	Not established
SECTION 12 - ECOLOGICAL INFORMATION				
<p>No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. Tricresyl phosphate, one of the ingredients in this mixture is classified as a Marine Pollutant but does not meet the diminimus requirements to classify as a transportation hazard.</p>				
SECTION 13 - DISPOSAL CONSIDERATIONS				
<p>WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce concentrated hazardous vapors or fumes in a disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 -299" for complete waste disposal regulations for ignitable materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.</p>				
SECTION 14 - TRANSPORT INFORMATION				
PROPER SHIPPING NAME: Not Regulated under DOT, IATA, IMO/IMDG, TDG, or RID/ADR				
DOT HAZARD CLASS / Pack Group: None		IATA HAZARD CLASS / Pack Group: None		
IMDG/IMO HAZARD CLASS / Pack Group: None		TDG HAZARD CLASS / Pack Group: None		
RID/ADR HAZARD CLASS / Pack Group:		UN NUMBER: None		
LABEL: None		HAZARD SYMBOL: None		
<p>Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.</p>				

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SECTION 15 - REGULATORY INFORMATION
TSCA (Toxic substance Control Act) - All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.
SARA TITLE III (Superfund Amendments and Reauthorization Act) 311/312 Hazard Categories - None
313 Reportable Ingredients - (a) A "Yes" in the SARA TITLE III column in Section 2 indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.
CERCLA (Comprehensive Response Compensation and Liability Act) - No reportable quantities
CALIFORNIA PROPOSITION 65 - The following ingredients are present in this product at less than 0.05% and known to the state of California to cause cancer: Lead and Cadmium. The following ingredients are present in this product at less than 0.05% and known to the state of California to cause reproductive toxicity: Lead and Cadmium.
State Right To know -Ingredients are reported as required by laws in CA, FL, MA, MN, NJ, PA, and RI.
CPR (Canadian Controlled Products Regulations - This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: Not controlled
IDL (Canadian Ingredient Disclosure List - Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.
DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List) - Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.
EINECS (European Inventory of Existing Commercial Chemical Substances - Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.
EC Hazard Symbols - None
EC Risk Phrases – None
EC Safety Phrases S2: Keep out of the reach of children.

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SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS

HEALTH 0

FLAMMABILITY 0

PHYSICAL HAZARD 0

PERSONAL PROTECTIVE EQUIPMENT : A – Safety Glasses

0 = INSIGNIFICANT, 1 = SLIGHT, 2 = MODERATE, 3 = HIGH, 4 = EXTREME

*** = Chronic Health Hazard**

REVISION SUMMARY:

This MSDS has been revised in the following sections: No changes

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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.