

**MATERIAL SAFETY DATA SHEET**

DATE REVISED: 2/9/05

PRODUCT NAME: Thermo-Lag 3000 Part A (100% Solids)

NU-CHEM, INC.  
2200 Cassens Dr.  
Fenton, MO 63026  
PHONE: (636) 349-1515

Emergency Telephone No. with Chemtrec 1-800-424-9300  
International (call collect) 703-527-3887

**HMIS HAZARD RATINGS**

LEAST	0	HEALTH HAZARD	1
SLIGHT	1	FLAMMABILITY HAZARD	2
MODERATE	2	REACTIVITY HAZARD	0
HIGH	3	MAXIMUM PERSONAL PROTECTION	B
EXTREME	4		

**SECTION I - PRODUCT IDENTIFICATION**

PRODUCT NAME: Thermo-Lag 3000 Part A D.O.T. HAZARD CLASS: NONE  
 PRODUCT CLASS: Epoxy Subliming Coating D.O.T. Shipping Name: Paint  
 D.O.T. Number: NONE

**SECTION II - PHYSICAL DATA**

APPEARANCE AND ODOR : Light grey viscous liquid, with sweet odor.

BOILING POINT (at 760 mm Hg): above 200°F WEIGHT PER GALLON (lbs.): 11.0±0.75  
 VAPOR PRESSURE (at 20C or 68F): Not Applicable VOLITILE ORGANIC CONTENT (VOC): 0.0 lb/gal  
 EVAPORATION RATE (ether = 1): Not Applicable PERCENT VOLATILES BY VOLUME: 0 %  
 VAPOR DENSITY : Not Applicable SOLUBILITY IN WATER: very low

**SECTION III - HAZARDOUS COMPONENTS**

INGREDIENT	CAS #	PERCENT BY VOLUME	OCCUPATIONAL EXPOSURE LIMITS	
			OSHA PEL	ACGIH TLV
*Bisphenol A/ Epichlorohydran Resin	25068-38-6	20-30 %	—	—
Multifunctional Acrylate Momomer	015625-89-5	<8 %	—	—
N-butyl glycidyl ether	2426-08-6	1-3 %	50 ppm	25 ppm
‡Titanium Dioxide (total dust)	13463-67-7	5-10 %	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
(respirable dust)			5 mg/m <sup>3</sup>	51 mg/m <sup>3</sup>

\* Indicates toxic chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372

\*Bisphenol A/Epichlorohydran Resin—ORAL- &gt;4g/kg(rat)—SKIN-&gt;20g/kg(rabbit)

N-butyl giycidyl ether—50% mortality in rats at 300 ppm, tested positive in vitro genitic toxicity assay

‡Hazard for this material is as a dust only. This hazard is eliminated in liquid paints. Dust hazard may be applicable if dried coating is subjected to grinding and/or sanding operations.

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA****FLAMMABILITY CLASSIFICATION**

OSHA : Combustible Liquid, Class IIIA

FLASH POINT : 185 °F

DOT : Combustible Liquid, n.o.s.

TEST METHOD: PMCC

**FLAMMABILITY LIMITS**LEL: Not ApplicableUEL: Not Applicable

EXTINGUISHING MEDIA : Foam, carbon dioxide and dry chemical.

**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: Thermo-Lag 3000 Part A(100% Solids)

SPECIAL FIRE FIGHTING PROCEDURES : Water spray may be used to cool unruptured containers. Firefighters must use self-contained breathing apparatus with a full facepiece operated in a pressure demand mode to prevent inhalation of hazardous decomposition products. Use appropriate extinguishing media to control fire. Water may cause violent frothing if sprayed directly into containers of burning liquid.

UNUSUAL FIRE AND EXPLOSION HAZARDS : Sealed containers may rupture if overheated.

HAZARDOUS DECOMPOSITION PRODUCTS : Thermal oxidative decomposition can produce toxic gases, including oxides of nitrogen, hydrocarbon fragments and carbon monoxide.

**SECTION V - REACTIVITY DATA**

STABILITY	UNSTABLE STABLE	X	CONDITIONS TO AVOID: Elevated temperatures
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INCOMPATIBILITY (MATERIALS TO AVOID) : Strong Oxidizers, Strong Bases

HAZARDOUS POLYMERIZATION	MAY OCCUR WILL NOT OCCUR	X	CONDITIONS TO AVOID : Strong acids or bases in bulk.
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**SECTION VI - HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE : See HAZARDOUS COMPONENTS list in Section III.

EFFECTS OF OVEREXPOSURE :

Eyes: Direct contact with product may result in eye irritation.

Skin: Prolonged or repeated contact with product may cause skin irritation.

Inhalation of free pigment dust: Overexposure can cause coughing wheezing, shortness of breath, restricted nasal passages and lung injury.

Swallowing: Gastrointestinal irritation, nausea, vomiting, diarrhea, death, aspiration into the lungs which can be fatal.

CHRONIC (LONG TERM, CUMULATIVE): None known.

PRIMARY ROUTES OF ENTRY: Dermal and Inhalation

FIRST AID PROCEDURES :

If Inhaled: Remove to fresh air. Contact a physician for advice.

If in Eyes: Flush with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

If on Skin: Thoroughly wash exposed area with soap and water. Remove and wash contaminated clothing before reuse.

Consult medical personnel if irritation develops.

If Swallowed: Get immediate medical attention.

**SECTION VII - SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED : Keep unnecessary people away. Contain spill with inert material (sand, earth, ect.) and transfer the material to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Use protective gloves, goggles and clothing. Maintain adequate ventilation and use respiratory protective devices, avoid the breathing of vapors.

WASTE DISPOSAL METHOD : Dispose of in accordance with Federal, state and local regulations regarding pollution.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

VENTILATION TYPE : Sufficient ventilation should be provided through both local and general exhaust to keep the air contaminant concentration below applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values(TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

RESPIRATORY PROTECTION : Respiratory protective devices must be used, in conjunction with and as a back-up to engineering and administrative controls, to maintain TLV and PEL of airborne contaminants below the listed values for those hazardous ingredients identified in Section II of this MSDS. Observe OSHA regulations for respirator use (CFR 29 1910.134) whenever a respirator is needed. Particulate, chemical cartridge, air-purifying half-mask respirators can be used within certain limitations; consult the respirator manufacturer for specific uses and limitations. In confined, poorly ventilated areas where the airborne contaminant concentrations are heavy or unknown, the use of a NIOSH/MSHA approved fresh-air supplied respirator is mandatory.

PROTECTIVE GLOVES : Impervious, cotton lined rubber      EYE PROTECTION : Chemical resistant splash goggles

OTHER PROTECTIVE EQUIPMENT: Use chemically resistant coveralls or apron to protect against skin and clothing contamination.

HYGIENIC PRACTICES: Wash hands and other contaminated skin areas with warm soap and water before eating.

### **SECTION IX - SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE : Store in dry area. Keep closures tight and upright to prevent leakage. Do not store in high temperature areas or near fire or open flame.

### **WARRANTY STORAGE CONDITIONS**

MAXIMUM AVERAGE TEMPERATURE (FOR WARRANTY PERIOD)	BELOW 80° F
MAXIMUM DAILY AVERAGE TEMPERATURE	BELOW 90° F

OTHER PRECAUTIONS : Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. In confined areas, wear an appropriate, properly fitted respirator. Do not take internally. Keep out of the reach of children. Do not reuse or alter containers without proper industrial cleaning. Do not weld or flame cut empty, uncleaned containers due to potential fire and explosion hazard.

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. It is the user's responsibility to determine the suitability of this information for the adoption of the necessary safety precautions. We reserve the right to revise Material Safety Data Sheets periodically as new information becomes available.

**MATERIAL SAFETY DATA SHEET**

DATE REVISED: 2/9/05

PRODUCT NAME: Thermo-Lag 3000 Part B (100% Solids)

NU-CHEM, INC.  
 2200 Cassens Dr.  
 Fenton , MO 63026  
 PHONE: (636) 349-1515

Emergency Telephone No. with Chemtrec 1-800-424-9300  
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**HMIS HAZARD RATINGS**

LEAST	0	HEALTH HAZARD	2
SLIGHT	1	FLAMMABILITY HAZARD	1
MODERATE	2	REACTIVITY HAZARD	0
HIGH	3	MAXIMUM PERSONAL	
EXTREME	4	PROTECTION	B

**SECTION I - PRODUCT IDENTIFICATION**

PRODUCT NAME: Thermo-Lag 3000 Part B D.O.T. HAZARD CLASS: NONE  
 PRODUCT CLASS : Subliming Coating Catalyst D.O.T. Shipping Name: Paint  
 D.O.T. UN Number: NONE

**SECTION II - PHYSICAL DATA**

APPEARANCE AND ODOR : Black viscous liquid, with Mercaptan Type odor.

BOILING POINT (at 760 mm Hg): above 200°F WEIGHT PER GALLON ( lbs. ): 11.0±0.75  
 VAPOR PRESSURE (at 20C or 68F): Not Applicable Volatile Organic Content (VOC): 0.0 lb/gal  
 EVAPORATION RATE (ether = 1): Not Applicable PERCENT VOLATILES BY VOLUME: 0 %  
 VAPOR DENSITY : Not Applicable SOLUBILITY IN WATER: very low

**SECTION III - HAZARDOUS COMPONENTS**

INGREDIENT	CAS #	PERCENT BY VOLUME	OCCUPATIONAL EXPOSURE LIMITS	
			OSHA PEL	ACGIH TLV
Phenol	108-95-2	1-2 %	19 mg/m <sup>3</sup>	19 mg/m <sup>3</sup>
‡Fibrous glass,continuous filament (total dust)	65997-17-3	1-5 %	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
(respirable dust)			5 mg/m <sup>3</sup>	

\* Indicates toxic chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372  
 Carcinogenicity of fibrous glass: NTP: No IARC: No Z List: No OSHA Reg: No  
 IARC categorized fibrous glass as not classifiable with respect to human carcinogenicity.

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA****FLAMMABILITY CLASSIFICATION**

OSHA : Combustable Liquid, Class IIIB FLASH POINT : >185 °F  
 DOT : NONE TEST METHOD: COC

FLAMMABILITY LIMITS LEL: Not Applicable UEL: Not Applicable

EXTINGUISHING MEDIA : Foam, carbon dioxide and dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES : Water spray may be used to cool unruptured containers. Firefighters must use self-contained breathing apparatus with a full facepiece operated in a pressure demand mode to prevent inhalation of hazardous decomposition products. Use appropriate extinguishing media to control fire. Water may cause violent frothing if sprayed directly into containers of burning liquid.

UNUSUAL FIRE AND EXPLOSION HAZARDS : Sealed containers may rupture if overheated.

**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: Thermo-Lag 3000 Part B (100% Solids)

HAZARDOUS DECOMPOSITION PRODUCTS : Thermal oxidative decomposition can produce toxic gases, including oxides of nitrogen, hydrocarbon fragments and carbon monoxide.

**SECTION V - REACTIVITY DATA**

STABILITY	UNSTABLE STABLE	X	CONDITIONS TO AVOID: Not applicable
INCOMPATIBILITY (MATERIALS TO AVOID) : Strong Oxidizers, Strong Bases			
HAZARDOUS POLYMERIZATION	MAY OCCUR WILL NOT OCCUR	X	CONDITIONS TO AVOID : Not applicable

**SECTION VI - HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE : See HAZARDOUS COMPONENTS list in Section III.

**EFFECTS OF OVEREXPOSURE :**

Eyes: Direct contact with product may result in eye irritation.

Skin: Prolonged or repeated contact with product may cause skin irritation.

Inhalation of free pigment dust: Overexposure can cause coughing wheezing, shortness of breath, restricted nasal passages and lung injury.

Swallowing: Gastrointestinal irritation, nausea, vomiting, diarrhea, death, aspiration into the lungs which can be fatal.

CHRONIC (LONG TERM, CUMULATIVE): None known.

PRIMARY ROUTES OF ENTRY: Dermal and Inhalation

**FIRST AID PROCEDURES :**

If Inhaled: Remove to fresh air. Restore breathing if necessary. Administer oxygen if breathing difficulty persists and contact a physician for advice.

If in Eyes: Flush with flowing water immediately and continuously for 15 minutes. Consult medical personnel if irritation develops.

If on Skin: Thoroughly wash exposed area with soap and water. Remove and wash contaminated clothing before reuse.

Consult medical personnel if irritation develops.

If Swallowed: If conscious, give two glasses of water to drink. Get immediate medical attention.

**SECTION VII - SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED : Keep unnecessary people away. Contain spill with inert material (sand, earth, ect.) and transfer the material to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Floors may be slippery, care should be exercised to avoid falls.

WASTE DISPOSAL METHOD : Burn in adequate incinerator or bury in an approved landfill.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

VENTILATION TYPE : Sufficient ventilation should be provided through both local and general exhaust to keep the air contaminant concentration below applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values(TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

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PRODUCT NAME: Thermo-Lag 3000 Part B (100% Solids)

PROTECTIVE GLOVES : Impervious, cotton lined rubber      EYE PROTECTION : Chemical resistant splash goggles

OTHER PROTECTIVE EQUIPMENT: Use chemically resistant coveralls or apron to protect against skin and clothing contamination.

HYGIENIC PRACTICES: Wash hands and other contaminated skin areas with warm soap and water before eating.

**SECTION IX - SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE : Store in dry area. Keep closures tight and upright to prevent leakage. Do not store in high temperature areas or near fire or open flame.

**WARRANTY STORAGE CONDITIONS**MAXIMUM AVERAGE TEMPERATURE (FOR WARRANTY PERIOD)      BELOW 80° F  
MAXIMUM DAILY AVERAGE TEMPERATURE                              BELOW 90° F

OTHER PRECAUTIONS : Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. In confined areas, wear an appropriate, properly fitted respirator. Do not take internally. Keep out of the reach of children. Do not reuse or alter containers without proper industrial cleaning. Do not weld or flame cut empty, uncleaned containers due to potential fire and explosion hazard.

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