



Material Safety Data Sheet



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: EPX4 (Part A)
PRODUCT LINE: INI Heat Shield
PRODUCT NUMBER: HS-EPX4-A
MANUFACTURER: INDUSTRIAL NANOTECH INC.
 1925 TRADE CENTER WAY, SUITE 1
 NAPLES, FLORIDA 34109
EMERGENCY PHONE: 1(800) 767-3998 or 1 (239) 254-0346
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PRODUCT USE: PAINT / COATING / LIQUID INSULATION
DATE OF PREPARATION: APRIL 8, 2015

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	WT/ WT %	UNITS	VAPOR PRESSURE
2-(2-BUTOXYETHOXY)-ETHANOL	112-34-5	2.0 – 4.0 ACGIH TLV OSHA PEL	not available not available	0.06 mm
ETHYLENE GLYCOL	107-21-1	2.0 – 3.0 ACGIH TLV OSHA PEL	100 MG/M3 Ceiling (aerosol) 50 PPM Ceiling	0.12 mm
HYDRO-NM - OXIDE	PROPRIETARY	1.0 – 10.0 ACGIH TLV OSHA PEL	not available not available	
TITANIUM DIOXIDE	13463-67-7	15.0 –18.0 ACGIH TLV OSHA PEL OSHA PEL	10 mg/m3 as Dust 10 mg/m3 Total Dust 5 mg/m3 Respirable Fraction	

SECTION 3: HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE: EYE CONTACT, SKIN CONTACT, INHALATION

EFFECTS OF OVEREXPOSURE:

EYES: MAY CAUSE EYE IRRITATION

SKIN: PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION

INHALATION: IRRITATION OF THE UPPER RESPIRATORY SYSTEM

In a confined area vapors in high concentration may cause headache, nausea or dizziness. Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- Liver
- Urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE: REDNESS AND ITCHING OR BURNING SENSATION MAY INDICATE EYE OR EXCESSIVE SKIN EXPOSURE.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NONE GENERALLY RECOGNIZED

CANCER INFORMATION: REFER TO SECTION 11 FOR TOXICOLOGY DATA

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

SECTION 4: FIRST AID MEASURES

EYES: FLUSH EYE WITH WATER FOR 15 MINUTES, SEEK MEDICAL ATTENTION

SKIN: WASH WITH SOAP AND WATER, SEEK MEDICAL ATTENTION IF SYMPTOMS OCCUR

INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. CALL POISON CONTROL & SEEK MEDICAL ATTENTION

INHALATION: IF AFFECTED, REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT > 200 DEG. F. (>93 DEG. C.)	LEL Not Applicable	UEL Not Applicable	FLAMMABILITY CLASSIFICATION Not Applicable
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EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, ALCOHOL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: CLOSED CONTAINERS MAY EXPLODE (DUE TO THE BUILD-UP OF PRESSURE) WHEN EXPOSED TO EXTREME HEAT.

DURING EMERGENCY CONDITIONS OVER EXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION.

SPECIAL FIRE FIGHTING PROCEDURES: FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED.

WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. REMOVE WITH INERT ABSORBENT. WEAR SKIN, EYE, AND RESPIRATORY PROTECTIVE EQUIPMENT.

SECTION 7: HANDLING AND STORAGE

STORAGE CATEGORY: DOL STORAGE CLASS IIIB

STORAGE: KEEP CONTAINER CLOSED WHEN NOT IN USE. TRANSFER ONLY TO APPROVED CONTAINERS WITH COMPLETE AND APPROPRIATE LABELING. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. STORE IN COOL, DRY AREA

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES: USE ONLY WITH ADEQUATE VENTILATION. AVOID CONTACT WITH SKIN AND EYES. AVOID BREATHING VAPOR AND SPRAY MIST. WASH HANDS AFTER USING. THIS COATING MAY CONTAIN MATERIALS CLASSIFIED AS NUISANCE PARTICULATES (LISTED "AS DUST" IN SECTION 2) WHICH MAY BE PRESENT AT HAZARDOUS LEVELS ONLY DURING SANDING OR ABRADING OF THE DRIED FILM. IF NO SPECIFIC DUSTS ARE LISTED IN SECTION 2, THE APPLICABLE LIMITS FOR NUISANCE DUSTS ARE ACGIH TLV 10 MG/M3 (TOTAL DUST), 3 MG/M3 (RESPIRABLE FRACTION), OSHA PEL 15 MG/M3 (RESPIRABLE FRACTION).

VENTILATION: LOCAL EXHAUST PREFERABLE. GENERAL EXHAUST ACCEPTABLE IS THE EXPOSURE TO MATERIALS IN SECTION 2 IS MAINTAINED BELOW APPLICABLE EXPOSURE LIMITS. REFER TO OSHA STANDARDS 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION: IF PERSONAL EXPOSURE CANNOT BE CONTROLLED BELOW APPLICABLE LIMITS BY VENTILATION, WEAR A PROPERLY FITTED ORGANIC VAPOR/PARTICULATE RESPIRATOR APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST MATERIALS IN SECTION 2. WHEN SANDING OR ABRADING THE DRIED FILM, WEAR A DUST/ MIST RESPIRATOR APPROVED BY NIOSH/MSHA FOR DUST WHICH MAY BE GENERATED FROM THIS PRODUCTS, UNDERLYING PAINT, OR THE ABRASIVE.

PROTECTIVE GLOVES: WEAR GLOVES WHICH ARE RECOMMENDED BY GLOVE SUPPLIER FOR PROTECTION AGAINST MATERIALS IN SECTION 2.

EYE PROTECTION: WEAR SAFETY SPECTACLES WITH UNPERFORATED SIDE SHIELDS.

OTHER PRECAUTIONS: THIS PRODUCT MUST BE MIXED WITH OTHER COMPONENTS BEFORE USE. BEFORE OPENING THE PACKAGES, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

WORK HYGIENIC PRACTICES: WASH THOROUGHLY IMMEDIATELY AFTER HANDLING; PREVENT EYE CONTACT, PROLONGED SKIN CONTACT, AND EXCESSIVE INHALATION.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: WHITE LIQUID

ODOR: NONDESCRIPT

PHYSICAL STATE: LIQUID, MEDIUM VISCOSITY

PH: >2.0, >11.5

SPECIFIC GRAVITY: 1.17

BOILING POINT: 212-448F (100-231C)

MELTING POINT: NOT AVAILABLE

VOLATILE VOLUME: 62%

EVAPORATION RATE: SLOWER THAN ETHER

VAPOR DENSITY: HEAVIER THAN AIR

SOLUBILITY IN H2O: NOT AVAILABLE

VOLATILE ORGANIC COMPOUNDS (VOC THERORETICAL - AS PACKAGED):
1.08 LB/GAL / 129 G/L LESS WATER & FEDERALLY EXEMPT SOLVENTS
0.45 LB/GAL / 55 G/L EMITTED VOC
<150 G/L; 1.25 LB/GAL, MIXED

SECTION 10: STABILITY AND REACTIVITY

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS

CONDITIONS TO AVOID: NONE KNOWN

INCOMPATIBILITY: NONE KNOWN

HAZARDOUS DECOMPOSITION PRODUCTS: BY FIRE: CARBON DIOXIDE, CARBON MONOXIDE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS:

IARC'S MONOGRAPH NO. 93 REPORTS THERE IS SUFFICIENT EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL RATS EXPOSED TO TITANIUM DIOXIDE BUT INADEQUATE EVIDENCE FOR CARCINOGENICITY IN HUMANS AND HAS ASSIGNED A GROUP 2B RATING. IN ADDITION, THE IARC SUMMARY CONCLUDES, "NO SIGNIFICANT EXPOSURE TO TITANIUM DIOXIDE IS THOUGHT TO OCCUR DURING THE USE OF PRODUCTS IN WHICH TITANIUM IS BOUND TO OTHER MATERIALS, SUCH AS PAINT."

ETHYLENE GLYCOL IS CONSIDERED AN ANIMAL TERATOGEN. IT HAS BEEN SHOWN TO CAUSE BIRTH DEFECTS IN RATS AND MICE AT HIGH DOSES WHEN GIVEN IN DRINKING WATER OR BY GAVAGE. THERE IS NO EVIDENCE TO INDICATE IT CAUSES BIRTH DEFECT IN HUMANS.

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TOXICOLOGY DATA:

CAS NO.	INGREDIENT NAME			
112-34-5	2-(2-BUTOXYETHOXY)-ETHANOL	LC50 RAT LD50 RAT	4HR	NOT AVAILABLE 5660 MG/KG
107-21-1	ETHYLENE GLYCOL	LC50 RAT LD50 RAT	4HR	NOT AVAILABLE 4700 MG/KG
PROPRIETARY	HYDRO-NM-OXIDE	LC50 RAT LD50 RAT	4HR	NOT AVAILABLE NOT AVAILABL
13463-67-7	TITANIUM DIOXIDE	LC50 RAT LD50 RAT	4HR	NOT AVAILABLE NOT AVAILABLE

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NO DATA AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: REVIEW ALL STATE, FEDERAL AND LOCAL REGULATIONS REGARDING HEALTH AND DISPOSAL FOR APPROPRIATE PROCEDURES. PRODUCT DISPOSED OF IN "AS SOLD CONDITION" IS NOT A HAZARDOUS WASTE UNDER FEDERAL RCRA REGULATIONS. LANDFILLING OF FREE LIQUID IS NOT RECOMMENDED. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINER.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS: N/A

ID NUMBER: N/A

PACKING GROUP: N/A

LABEL STATEMENT: N/A

CANADA (TDG): NOT REGULATED FOR TRANSPORTATION

IMO: NOT REGULATED FOR TRANSPORTATION

IATA/ICAO: NOT REGULATED FOR TRANSPORTATION

SECTION 15: REGULATORY INFORMATION

SARA SECTION 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION:

THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF

CHEMICAL NAME	CAS NUMBER	% BY WT
ETHYLENE GLYCOL	107-21-1	2.0-3.0
GLYCOL ETHERS		3.0

CALIFORNIA PROPOSITION 65: WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

TSCA CERTIFICATION: ALL CHEMICALS IN THIS PRODUCT ARE LISTED, OR ARE EXEMPT FROM LISTING, ON THE TSCA INVENTORY.

SECTION 16: OTHER INFORMATION

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL OF THE INFORMATION REQUIRED BY THE CPR.

DISCLAIMER: TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED IN THIS MSDS IS ACCURATE OR IS OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE. NO LIABILITY, EXPRESSED OR IMPLIED, IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. BUYER ASSUMES LIABILITY IN ITS USE OF THIS MATERIAL.