



Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: EPX-H2O (Part A)
PRODUCT LINE: Heat Shield™
PRODUCT NUMBER: HS-EPXH2O-A
MANUFACTURER: SYNEFFEX™
1625 17th Street, Denver, CO 80202
EMERGENCY PHONE: 1(800) 858-3176 or 1 (720) 452-2650
WEBSITE: www.syneffex.com
PRODUCT USE: PAINT / COATING / LIQUID INSULATION
DATE OF PREPARATION: APRIL 8, 2015 - Revised March 16, 2018

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Carcinogenicity - Category 2
Specific target organ toxicity (repeated exposure) Category 2
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 14.5%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 17%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 20.2%

GHS Label Elements:

Hazard pictograms:



HMIS Codes

Signal Word: Warning
Hazard statements: Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure

Health	2*
Flammability	0
Reactivity	0

Precautionary Statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection.
Wear protective clothing. Do not breathe vapor.
Response: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.
Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental Label Elements: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.
This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Hazards Not Otherwise Classified: None known.

SECTION 3: 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

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INGREDIENT	CAS NO.	WT/ WT %	UNITS	VAPOR PRESSURE
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 4: FIRST AID MEASURES

Description of necessary first aid measures:

Eye Contact:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion:	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye Contact:	No known significant effects or critical hazards.
Inhalation:	No known significant effects or critical hazards.
Skin Contact:	No known significant effects or critical hazards.
Ingestion:	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye Contact:	No specific data.
Inhalation:	No specific data.
Skin Contact:	No specific data.
Ingestion:	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments:	No specific treatment.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable Extinguishing Media:	None known.

Specific hazards arising from the chemical:	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, metal oxide/oxides

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Special protective actions for fire-fighters:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small Spill:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Protective measures:	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store above freezing (32/0C). Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient Name	Exposure Limits
Titanium Dioxide	ACGIH TLV (United States, 3/2016). TWA: 10 mg/m ³ 8 hours. OSHA PEL (United States, 6/2016). TWA: 15 mg/m ³ 8 hours. Form: Total dust
Ethylene Glycol	ACGIH TLV (United States, 3/2016). C: 100 mg/m ³ Form: Aerosol
2-(2-Butoxyethoxy)-ethanol	ACGIH TLV (United States, 3/2016). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
2-Phenoxyethanol (industrial)	None.

Occupational exposure limits (Canada)

Ingredient Name	Exposure Limits
ethanediol	CA British Columbia Provincial (Canada, 7/2016). C: 100 mg/m ³ Form: Aerosol TWA: 10 mg/m ³ 8 hours. Form: Particulate STEL: 20 mg/m ³ 15 minutes. Form: Particulate C: 50 ppm Form: Vapour CA Ontario Provincial (Canada, 7/2015). C: 100 mg/m ³ Form: Aerosol only. CA Saskatchewan Provincial (Canada, 7/2013). CEIL: 100 mg/m ³ Form: aerosol CA Alberta Provincial (Canada, 4/2009). C: 100 mg/m ³ CA Québec Provincial (Canada, 1/2014). STEV: 50 ppm 15 minutes. Form: vapour and mist STEV: 127 mg/m ³ 15 minutes. Form: vapour and mist
2-(2-Butoxyethoxy)-ethanol	CA Ontario Provincial (Canada, 7/2015). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapour.
2-Phenoxyethanol (industrial)	CA Ontario Provincial (Canada, 7/2015). Absorbed through skin. TWA: 141 mg/m ³ 8 hours. TWA: 25 ppm 8 hours.

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Occupational exposure limits (Mexico)

Ingredient Name	Exposure Limits
ethanediol	NOM-010-STPS-2014 (Mexico, 4/2016). CEIL: 100 mg/m ³ Form: Only AEROSOL
2-(2-Butoxyethoxy)-ethanol	ACGIH TLV (United States, 3/2016). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor

Appropriate engineering controls:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures:

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection:

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection:

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid

Color: Not available

Odor: Not available

Odor threshold: Not available

pH: 9

Lower & upper explosive (flammable) limits: Lower: 0.9%
Upper: 15.3%

Relative density: 1.16

Partition coefficient: n-octanol/water: Not available

Decomposition temperature: Not available

Melting point: Not available

Boiling point: 100C (212F)

Flash point: Closed cup: 94°C (201.2°F) [Pensky-Martens Closed Cup]

Evaporation rate: 0.09 (butyl acetate = 1)

Flammability (solid, gas): Not available

Vapor pressure: 2.3 kPa (17.5 mm Hg) [at 20°C]

Vapor density: 1 [Air = 1]

Solubility: Not available

Auto-ignition temperature: not available

Molecular weight: Not applicable

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

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SECTION 10: STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethylene Glycol	LD50 Oral	Rat	4700 mg/kg	-
2-(2-Butoxyethoxy)-ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
2-Phenoxyethanol (industrial)	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Ethylene Glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-
2-(2-Butoxyethoxy)-ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
2-Phenoxyethanol (industrial)	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization: Not available.

Mutagenicity: Not available.

Carcinogenicity: Not available

Classification:

Product/ingredient Name	OSHA	IARC	NTP
Titanium Dioxide	—	2B	—

Reproductive toxicity: Not available.

Teratogenicity: Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Ethylene Glycol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-(2-Butoxyethoxy)-ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Phenoxyethanol (industrial)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

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Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Ethylene Glycol	Category 2	Not determined	Not determined
2-(2-Butoxyethoxy)-ethanol	Category 2	Not determined	Not determined
2-Phenoxyethanol (industrial)	Category 2	Not determined	Not determined

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 AVAILABLE
13463-67-7	TITANIUM DIOXIDE	LC50 RAT LD50 RAT	4HR	NOT AVAILABLE NOT AVAILABLE

Aspiration hazard: Not available.

Information on the likely routes of exposure: Not available.

Carcinogenicity: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects of critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute Toxicity estimates:

Route	ATE value
Oral	13329.9 mg/kg
Dermal	121315 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Ethylene Glycol	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 41000000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-(2-Butoxyethoxy)-ethanol	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
2-Phenoxyethanol (industrial)	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethylene Glycol	-	-	Readily
2-(2-Butoxyethoxy)-ethanol	-	-	Readily

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Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-Phenoxyethanol (industrial)	-	0.3493	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

IMDG: NOT REGULATED FOR TRANSPORTATION

Special precautions for user: Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

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

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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.

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