



Material Safety Data Sheet Set
HP-330 Clear Epoxy
Parts A-B



HP-330 CLEAR EPOXY PART A

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

GENERAL USE: Epoxy resin

PRODUCT DESCRIPTION: Transparent clear liquid, characteristic odor

MANUFACTURER'S NAME
JFB Hart Coatings, Inc.

DATE PREPARED: May 9, 2014
SUPERSEDES: May 7, 2010

ADDRESS
10210 Werch Drive, Suite 203
Woodbridge, IL 60517

TELEPHONE NUMBER FOR INFORMATION
(630) 633-6228

EMERGENCY TELEPHONE NUMBER
Infotrac (800) 535-5053 Outside USA (352) 323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: Clear to amber liquid, viscous, low volatility. May cause skin irritation. Low fire risk. Reacts with amines to produce heat. May cause sensitization. Toxic to aquatic organisms.

Potential Health Effects

EYE: Contact with eyes may cause irritation.

SKIN: Skin sensitizer. Contact with skin will cause irritation. Repeated and /or prolonged contact with the skin may cause allergic reaction.

INGESTION: May cause gastric distress, vomiting and diarrhea.

INHALATION: None expected. However, certain individuals may experience minor nausea or headaches.

Chronic Effects / Carcinogenicity

NTP Listed: No

IARC Group 1 or 2A: No

OSHA Regulated: No

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Registry No.</u>	<u>Percentage (wt/wt)</u>
Bisphenol A polymer with epichlorohydrin	25068-38-9	100

OSHA Regulatory Status: This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 – FIRST AID MEASURES

EYE: Remove contact lenses. Flush eyes with clear running water for 5 minutes while holding eyelids open; if irritation persists, seek medical attention.

SKIN: Remove contaminated clothing; wash affected area with plenty of soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

INGESTION: DO NOT induce vomiting unless directed to do so by medical personnel; never give anything by mouth to an unconscious person; seek medical attention.

INHALATION: Remove affected person to fresh air. If symptoms persist seek medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

Product is combustible.

EXTINGUISHING MEDIA: Carbon dioxide, water fog, dry chemical, chemical foam



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MEDIA NOT TO BE USED:	Do not use direct stream of water on pool fires as product may reignite on water surface.
FIRE & EXPLOSION HAZARDS:	Closed containers can explode due to buildup of pressure when exposed to extreme heat.
FIRE FIGHTING INSTRUCTIONS:	Firefighters must wear full face piece, self-contained breathing apparatus in positive pressure mode. Keep containers cool with water spray to prevent container rupture due to steam buildup.
HAZARDOUS DECOMPOSITION PRODUCTS:	Smoke, fumes, oxides of carbon.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Shut off source of leak if safe to do so. Dike and contain product. Confine spill, soak up with clay, sand or other approved absorbent; shovel product into approved container for disposal. Wash area with plenty of water. Do not discharge into lakes, ponds, streams or public waters.

SECTION 7 – HANDLING AND STORAGE

HANDLING	Keep away from food and drink. Wash hands before eating. Application of a direct flame to a container of liquid epoxy resin can cause explosion or fire.
STORAGE	Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. Keep this and other chemicals out of reach of children.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS	The use of local exhaust ventilation is recommended. No other special controls are indicated.
RESPIRATORY PROTECTION	None required.
SKIN PROTECTION	Recommended for general protection. Use gloves chemically resistant to this material such as butyl rubber, EVAL, nitrile, neoprene, PVC.
EYE PROTECTION	Goggles with side shields; safety eyebath nearby. Refer to 29 CFR 1910.133, CSA Z94.3-M1982, or European Standard EN166.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:	Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

EXPOSURE GUIDELINES Chemical	OSHA PEL		ACGIH TWA	
	ppm	mg/m ³	ppm	mg/m ³
None	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Transparent clear liquid; colorless to amber
ODOR	Odorless to slight
BOILING POINT	608 °F (320 °C)
FREEZING POINT	Not available
VAPOR PRESSURE	<0.000001 Pa



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SOLUBILITY IN WATER	5.1 – 8.4 mg/l @ 20 °C
SPECIFIC GRAVITY	1.160 @ 20 °C
pH	Not determined
VOLATILE ORGANIC COMPOUNDS	None
VISCOSITY	11000 – 14000 mPa.s @ 25 °C
FLASH POINT [METHOD]	507-514 °F (264-268 °C)
FLAMMABLE LIMITS	LEL: Not applicable UEL: Not applicable

SECTION 10 – STABILITY AND REACTIVITY

STABILITY	Stable
MATERIALS TO AVOID	Can react vigorously with strong oxidizers, strong acids, mineral and organic bases, primary and secondary aliphatic amines.
CONDITIONS TO AVOID	Extreme temperatures
HAZARDOUS DECOMPOSITION PRODUCTS	Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, nitrogen, hydrocarbons, fumes, and smoke may be produced.
HAZARDOUS POLYMERIZATION	May occur in the presence of an aliphatic amine.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Component</u>	<u>LD50 Oral (rat)</u>	<u>LD50 Dermal (rabbit)</u>	<u>LC50 Inhalation (rat)</u>
Bisphenol A polymer with epichlorohydrin	> 15000 mg/kg	23000 mg/kg	Not available

SECTION 12 – EXOLOGICAL INFORMATION

Material is moderately toxic to aquatic organisms on an acute basis. Not readily biodegradable by OECD test guidelines

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal Regulations. Product is classified as non - hazardous, however, non-hazardous materials may become hazardous waste upon contact with other products. Consult your local, state, Provincial or Federal Environmental Protection Agency before disposing of any chemicals.

SECTION 14 – TRANSPORT INFORMATION

US DOT	Not regulated
Proper Shipping Name:	
UN Number:	
Packing Group:	
Special Instructions:	
IATA	
Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (Epoxy Resin), Marine Pollutant
UN Number:	UN3082



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Packing Group: III
Special Instructions: 964

IMDG

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Epoxy resin), Marine Pollutant
UN Number: UN 3082
Packing Group: III
Special Instructions: F-A, S-F

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EC, Canadian TDG, and United Nations TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15 – REGULATORY INFORMATION

UNITED STATES

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

Immediate health
Chronic health

313 Reportable Ingredients:

None

CERCLA (Comprehensive Response Compensation and Liability Act)

None

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

There are no chemicals present known to the state of California to cause cancer or reproductive toxicity.

CANADA

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: D2B



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 3 unless otherwise indicated.



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MATERIAL SAFETY DATA SHEET

EUROPE

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.

EU CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/EEC AND DIRECTIVE 199/45/EC
Xi; R38 –R43 – N; R51/53

Risk Phrases

R38 – Irritating to skin.

R43 – May cause sensitisation by skin contact.

R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S2 – Keep out of the reach of children.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 – Wear suitable gloves.

S61 – Avoid release to the environment. Refer to special instructions / safety data sheets.



SECTION 16 – OTHER INFORMATION

HMIS HAZARD RATINGS	
Health	1*
Flammability	1
Physical hazard	0
Personal Protection	B

HMIS SYSTEM

0 = Insignificant hazard 3 = High

1 = Slight 4 = Extreme

2 = Moderate

* = Chronic health hazard

B = Safety Glasses, Gloves

MSDS Changes: Sections 2,4,7,8,9,11,12,14,15,16.

May 9, 2014

To the best of our knowledge, the information contained herein is accurate. However, JFB Hart Coatings, Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.



HP-330 CLEAR EPOXY PART B

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

GENERAL USE: Epoxy curing agent

PRODUCT DESCRIPTION: Amber liquid, ammonia odor, corrosive

MANUFACTURER'S NAME
JFB Hart Coatings, Inc.

DATE PREPARED: May 16, 2014

SUPERSEDES: May 10, 2010

ADDRESS
10210 Werch Drive, Suite 203
Woodbridge, IL 60517

TELEPHONE NUMBER FOR INFORMATION
(630) 633-6228

EMERGENCY TELEPHONE NUMBER
Infotrac (800) 535-5053 Outside USA (352) 323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: Amber liquid with ammonia odor. Corrosive and severely irritating to eyes, skin and respiratory system. Reacts with epoxy resins to produce heat. Contains chemicals that may cause skin or respiratory sensitization.

Potential Health Effects

EYE: CORROSIVE. Contact with eyes is painful and irritating and may cause chemical burns, necrosis and permanent injury.

SKIN: Corrosive and irritating. Chemical burns may result from contact. May cause allergic reaction in sensitive individuals.

INGESTION: Corrosive and irritating to digestive tract. May cause gastric distress, stomach pains and vomiting.

INHALATION: Corrosive and irritating to upper respiratory tract and mucous membranes. May cause respiratory sensitization which can be life-threatening.

Chronic Effects / Carcinogenicity

NTP Listed: No

IARC Group 1 or 2A: No

OSHA Regulated: No

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Registry No.</u>	<u>Percentage (wt/wt)</u>
Polyoxypropylenediamine	9046-10-0	30 – 60
Nonylphenol (branched)	84852-15-3	10 – 30
Triethanolamine	102-71-6	3 – 7
Tris-2,4,6-(Dimethylaminomethyl) phenol	90-72-2	3 – 7
Piperazine	110-85-0	1 – 5
Dipropylene glycol methyl ether	34590-94-8	1 - 5
N-Aminoethylpiperazine	140-31-8	0.5 – 1.5

OSHA Regulatory Status: This product is classified as hazardous under OSHA regulations.

SECTION 4 – FIRST AID MEASURES

EYE: Remove contact lenses. Immediately flush eyes with clear running water for 15 minutes while holding eyelids open; seek immediate medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water. DO NOT attempt to neutralize with chemical agents. Seek immediate medical attention. Launder contaminated clothing separately before reuse or discard.



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INGESTION: DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs; seek immediate medical attention.

INHALATION: Remove affected person to fresh air. Wash mouth and nasal passages with water repeatedly. Provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, water fog, dry chemical, chemical foam

MEDIA NOT TO BE USED: None known

FIRE & 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!

FIRE FIGHTING INSTRUCTIONS: Firefighters must wear self-contained breathing apparatus in positive pressure mode. Cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat. Caution – material will support combustion. Product is corrosive.

HAZARDOUS DECOMPOSITION PRODUCTS: Smoke, fumes, oxides of carbon, ammonia

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION – CORROSIVE, WILL SUPPORT COMBUSTION. Do not wash to sanitary sewer. All spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal. Flush area with water, recover flush for proper disposal.

SECTION 7 – HANDLING AND STORAGE

HANDLING Keep away from food and drink. Wash hands before eating.

STORAGE Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures, open flames. CAUTION – product is corrosive. This material will support combustion. Keep this and other chemicals out of reach of children.

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 corrosion resistant, explosion-proof ventilation equipment.

RESPIRATORY PROTECTION None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134, CSA Z94.4-93, or European Standard EN 149 for complete regulations.

SKIN PROTECTION Neoprene or rubber gloves with cuffs.

EYE PROTECTION Chemical splash goggles; safety eyebath nearby. If splashing may occur, use face shield. Refer to 29 CFR 1910.133, CSA Z94.3-M1982, or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls, apron, or other equipment should be worn to minimize skin contact.



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EXPOSURE GUIDELINES

Chemical	OSHA PEL		ACGIH TWA	
	ppm	mg/m ³	ppm	mg/m ³
Nonylphenol (branched)*	*5	-	*10	-
Triethanolamine	-	-	-	5
Dipropylene glycol methyl ether	100	600 (S)	100	150

* The ACGIH Threshold Limit Value (TLV) has not been established nor has OSHA established the Permissible Exposure Limit (PEL) for this material, therefore the limits described have been established as guidelines by the manufacturer.

(S) = skin designation

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Amber liquid,		
ODOR	Ammonia		
BOILING POINT	500 °C (260 °C)		
FREEZING POINT	Not determined		
VAPOR PRESSURE	Not determined		
SOLUBILITY IN WATER	Appreciable		
SPECIFIC GRAVITY	1.035		
pH	11.5 – 12.0		
VOLATILE ORGANIC COMPOUNDS	< 0.5lbs/gal		
VISCOSITY	Not determined		
FLASH POINT [METHOD]	> 250 °F (121.1 °C)		
FLAMMABLE LIMITS	LEL: Not applicable	UEL: Not applicable	

SECTION 10 – STABILITY AND REACTIVITY

STABILITY	Stable
MATERIALS TO AVOID	Strong oxidizers, strong acids, strong alkalis
CONDITIONS TO AVOID	Extreme temperatures, open flames
HAZARDOUS DECOMPOSITION PRODUCTS	Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon and nitrogen, hydrocarbons, fumes, and smoke may be produced.
HAZARDOUS POLYMERIZATION	Will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Component	LD50 Oral (rat)	LD50 Dermal (rabbit)	LC50 Inhalation (rat)
Polyoxypropylenediamine	2850 mg / kg	Not available	Not available
Nonylphenol (branched)	1620 mg / kg	Not available	Not available
N-Aminoethylpiperazine	2140 µl/kg	Not available	Not available
Tris-2,4,6-(Dimethylaminomethyl) phenol	1670 mg/kg	Not available	Not available

Contains chemicals that have caused adverse effects on reproduction in animal studies.



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SECTION 12 – EXOLOGICAL INFORMATION

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. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, Provincial, and Federal Regulations. Refer to 40 CFR §§ 260 – 299 for complete waste disposal regulations for corrosive materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

SECTION 14 – TRANSPORT INFORMATION

US DOT

Proper Shipping Name: Polyamines, liquid, corrosive, n.o.s (Polyoxypropylenedamine)
Hazard Class: 8
UN Number: UN 2735
Packing Group: III
Special Instructions: 173.154; 173.203; 173.241

IATA

Proper Shipping Name: Polyamines, liquid, corrosive, n.o.s (Polyoxypropylenedamine)
Hazard Class: 8
UN Number: UN 2735
Packing Group: III
Special Instructions: Y818; 818; 820

IMDG

Proper Shipping Name: Polyamines, liquid, corrosive, n.o.s (Polyoxypropylenedamine)
Hazard Class: 8
UN Number: UN 2735
Packing Group: III
Special Instructions: 223; 274; 944, P001; LP07; IBC03; T7; TP1; TP28

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EC, Canadian TDG, and United Nations TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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

Immediate health
Delayed health

313 Reportable Ingredients:



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None above 1%

CERCLA (Comprehensive Response Compensation and Liability Act)
None

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
There are no chemicals present known to the state of California to cause cancer or reproductive toxicity.

CANADA
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: E, D1B, D2B



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 3 unless otherwise indicated.

EUROPE
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.

EU CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/EEC
Xn; R22-42-43-62-63 – C; R34-41

Risk Phrases
R22 – Harmful if swallowed.
R34 – Causes burns
R41 – Risk of serious damage to the eyes
R42/43 – May cause sensitization by inhalation and skin contact.
R62 –Possible risk of impaired fertility.
R63 – Possible risk of harm to the unborn child.



Safety Phrases
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27/28 – After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

SECTION 16 – OTHER INFORMATION

HMIS HAZARD RATINGS	
Health	3
Flammability	1
Physical hazard	0
Personal Protection	C

HMIS SYSTEM

0 = Insignificant hazard 3 = High
 1 = Slight 4 = Extreme
 2 = Moderate * = Chronic health hazard
 B=Safety Glasses, Gloves, Apron

MSDS Changes: revisions Section 2, 3, 11, 15.



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MATERIAL SAFETY DATA SHEET

To the best of our knowledge, the information contained herein is accurate. However, JFB Hart Coatings, Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.