DIAMONDCOAT

SAFETY DATA SHEET
EPOXY HARDENER
Updated 01/30/2018

SECTION 1: IDENTIFICATION

GHS PRODUCT IDENTIFIERS:

PRODUCT NAME:	Diamond Coat Outdoor Flex Epoxy Hardener
SYNONYMS, TRADE NAMES:	Diamond Coat Outdoor Flex Epoxy Part B
OTHER MEANS OF IDENTIFICATION:	Not available

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE:

USES:	Multiple
RESTRICTIONS ON USE:	None

SUPPLIER DETAILS:

MANUFACTURER/SUPPLIER:	Diamond Coat Epoxy 2530 Foresight Circle E Grand Junction, CO 81505, USA Phone: 1 (970) 628-1846 Toll Free: 1 (888) 628-0846 Fax: 1 (888) 628-0846
CONTACT PERSON:	

EMERGENCY PHONE NUMBER:

INFOTRAC (24 HRS): USA & CANADA	1 (800) 535-5053
INFOTRAC (24 HRS): INTERNATIONAL	+1 (352) 323-3500

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Acute toxicity, oral:	Category 4, H302
Acute toxicity, dermal:	Category 4, H312
Skin Corrosion:	Category 1C, H314
Eye Damage:	Category 1, H318
Skin sensitization:	Category 1, H317
Hazardous to the aquatic environment:	Chronic Category 3, H412
Acute toxicity, inhalation:	Category 4, H332
Hazardous to the aquatic environment:	Acute Category 3, H402
Specific Organ Toxicity:	Single Exposure, Category 3, H335, H336
Toxic to reproduction:	Category 2, H361

GHS LABEL ELEMENTS:

HAZARD SYMBOLS:

SIGNAL WORDS: Danger

HAZARD STATEMENTS:
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

PREVENTION:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breath mists.
P261 Avoid breathing dust, fumes, gas mist, vapors and spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, clothing, and eye/face protection.

RESPONSE:
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312 Call a POISON CENTER if you feel unwell.
P303+P361+P364+P353+P352 IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical attention.
P391 Collect spillage.

STORAGE:
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

DISPOSAL:
P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	CONTENT
Isophoronediamine	2855-13-2	20-40%
Benzyl Alcohol	100-51-6	10-30%
2-methyl-1,5-pentanediamine	15520-10-2	1-10%
N-(2-aminoethyl)piperazine	140-31-8	1-10%
Polyoxypropylenetriamine	39423-51-3	20-40%
Nonylphenol	84852-15-3	1-10%

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: FIRST-AID MEASURES

DESCRIPTION OF NECESSARY FIRST-AID MEASURES:

INHALATION: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

SKIN: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention immediately.

EYES: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Get medical attention immediately.

INGESTION: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

SYMPTOMS: Burns. Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. Persons with sensitive airways (e.g., asthmatics) may react to vapors. See section 11 for additional information.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

TREATMENT: Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

SUITABLE: Use water spray, foam, dry chemical or carbon dioxide.

UNSUITABLE: None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

UNUSUAL FIRE & EXPLOSION HAZARDS: Product is not considered a fire hazard, but will burn if ignited. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

HAZARDOUS COMBUSTION PRODUCTS: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous decomposition products for additional information.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear self-contained breathing apparatus (SCBA) equipped with a full face piece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. See section 9 for additional information.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

ENVIRONMENTAL PRECAUTIONS: Do not flush product into public sewer, water systems or surface waters.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Stop leak if without risk. Move containers from spill area. Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Use under well-ventilated conditions. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Discard shoes contaminated with this product.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from heat, sparks and open flames. Store dry at 15-40°C, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container contains residual product which may exhibit hazards of product. Do not reuse empty container without commercial cleaning or reconditioning.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PERAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

CHEMICAL NAME	CAS NUMBER	ACGIH-TWA	ACGIH-STEL
Isophoronediamine	2855-13-2	Not available	Not available
Benzyl Alcohol	100-51-6	Not available	Not available
2-methyl-1,5-pentanediamine	15520-10-2	Not available	Not available
N-(2-aminoethyl)piperazine	140-31-8	Not available	Not available
Polyoxypropylenetriamine	39423-51-3	Not available	Not available
Nonylphenol	84852-15-3	Not available	Not available

APPOPRIATE ENGINEERING CONTROLS: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain air concentrations below occupational exposure standards. When necessary use mechanical handling to reduce human contact with materials.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION:	Full face shield with safety glasses or goggles underneath are required.
SKIN PROTECTION:	Wear chemical resistant (impervious) gloves; PVC, neoprene, nitrile rubber, EVAL, butyl rubber. Wear chemical resistant protective clothing. Use good laboratory/ workplace procedures including personal protective clothing: lab coat and protective gloves.
RESPIRATORY PROTECTION:	Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.
GENERAL PROTECTION:	Eyewash fountains and safety showers are recommended in the work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid	UPPER/LOWER FLAMMABILTY OR EXPLOSIVE LIMITS:	Not available
COLOR:	Clear amber	VAPOUR PRESSURE:	<0.15 mm Hg at 20°C
ODOUR:	Amine-like	VAPOUR DENSITY:	Heavier than air
ODOUR THRESHOLD:	Not available	RELATIVE DENSITY:	1.02
PH:	Not available	SOLUBILITY(IES):	Slightly
MELTING POINT/ FREEZING POINT	Not available	PARTITION COEFFICIENT (n-octanol/water):	Not available
INITIAL BOILING POINT AND BOILING RANGE:	>204°C	AUTO-IGNITION TEMPERATURE:	Not available
FLASH POINT:	>93°C	DECOMPOSITION TEMPERATURE:	Not available
EVAPORATION RATE:	Not available	VISCOSITY:	2,250 cP at 25°C
FLAMMABILITY (SOLID, GAS):	Not available		

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY: Exothermic reactions including polymerization may occur in contact with strong acids, strong bases, alcohols, strong oxidizing agents and excessive heat.

CHEMICAL STABILITY: This product is stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Exothermic reactions including polymerization may occur in contact with strong acids, strong bases, alcohols, strong oxidizing agents and excessive heat.

CONDITIONS TO AVOID: Excessive heat and ignition sources.

INCOMPATIBLE MATIERALS: Avoid strong acids, bases, and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes, oxides of nitrogen and other products of incomplete combustion.

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE: Eyes, skin, inhalation and ingestion.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMCIAL AND TOXICOLOGICAL CHARACTERISTICS:

EYES:	Causes serious eye damage.
SKIN:	Causes severe skin burns. May cause allergic skin reaction. Harmful in contact with skin.
INHALATION:	Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
INGESTION:	Harmful if swallowed.

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE: Suspected of damaging fertility or the unborn child.

ACUTE TOXICITY:

CHEMCIAL NAME	LC_{50} INHALATION (RAT)	LD_{50} ORAL (RAT)	LD_{50} DERMAL (RABBIT)
Isophoronediamine	>5.01 mg/L	1,030 mg/kg	>2,000 mg/L
Benzyl Alcohol	Not available	1,230 mg/kg	>2,000 mg/L

2-methyl-1,5-pentanediamine	4.9 mg/L	1,170 mg/kg	1,870 mg/kg
N-(2-aminoethyl)piperazine	Not available	2,140 mg/kg	880 mg/kg
Polyoxypropylenetriamine	Not available	550 mg/kg	>2,000 mg/kg
Nonylphenol	Not available	1,300 mg/kg	Not available

CORROSION / IRRITATION / SENSITIZATION INFORMATION:

SKIN CORROSION/IRRITATION: Skin Corrosion – Category 1
SERIOUS EYE DAMAGE/IRRITATION: Eye Damage – Category 1
RESPIRATORY OR SKIN SENSITIZATION: Skin Sensitization – Category 1

CARCINOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICOLOGY INFORMATION:

GERM CELL MUTAGENICITY: Information is not available.
CARCINOGENICITY: Information is not available.
REPRODUCTIVE TOXICITY: Category 2

SPECIFIC TARGET ORGAN TOXICITY (STOT):

STOT-SINGLE EXPOSURE: Category 3, Inhalation.
STOT-REPEATED EXPOSRE: Information is not available.

ASPIRATION HAZARD: Information is not available.

OTHER INFORMATION: None

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY:

CHEMICAL NAME	TEST	SPECIES	RESULT
Isophoronediamine	LC50 (96 hrs)	Fish	110 mg/L
	EC50 (48 hrs)	Daphnia	23 mg/L
	EC10 (18 hrs)	Bacteria	1120 mg/L
Benzyl Alcohol	LC50 (96 hrs)	Fish	460 mg/L
	EC50 (48 hrs)	Daphnia	230 mg/L
	EgC50 (72 hrs)	Algae	770 mg/L
2-methyl-1,5-pentanediamine	LC50 (72 hrs)	Algae	>100 mg/L
	EC50 (48 hrs)	Daphnia	19.8 mg/L
	LC50	Fish	1,825 mg/L
N-(2-aminoethyl)piperazine	LC50 (24 hrs)	Fish	2,190 mg/L
	EC50 (48 hrs)	Daphnia	58 mg/L
	EC50 (72 hrs)	Algae	>1,000 mg/L
Polyoxypropylenetriamine	LC50 (96 hrs)	Fish	>100 mg/L
	EC50 (48 hrs)	Daphnia	13 mg/L
	ErC50 (72 hrs)	Algae	4.4 mg/L
Nonylphenol	LC50 (96 hrs)	Lepomis macrochirus	0.135 mg/L
	LOEC (96 hrs)	Lepomis macrochirus	0.211 mg/L
	NOEC (96 hrs)	Fathead minnow	0.083 mg/L

PERSISTENCE AND DEGRADBILITY:

CHEMICAL NAME	TEST	PERIOD	RESULT

Isophoronediamine	EU EC C.4-A Biodegradation: Determination of the "Read" Biodegradability: Dissolved Organic Carbon (DOC) Die-Away Test	28 Days	8%
Benzyl Alcohol	OECD 301A Ready Biodegradability – DOC Die Away test	21 Days	95-97%
2-methyl-1,5-pentanediamine	Readily biodegradable		
N-(2-aminoethyl)piperazine	OECD 301F Test	28 Days	0%
Polyoxypropylenetriamine	OECD Derived from OECD 301F (Biodegradation Test)	28 Days	<5%
Nonylphenol	Not available		

BIOACCUMULATIVE POTENTIAL:

CHEMICAL NAME	Log P_{ow}	BCF	POTENTIAL
Isophoronediamine	0.99	Not available	Low
Benzyl Alcohol	1.1	Not available	Low
2-methyl-1,5-pentanediamine	Not available	Not available	Not available
N-(2-aminoethyl)piperazine	<3	<100	Low
Polyoxypropylenetriamine	-1.13	Not available	Low
Nonylphenol	3.242	31	Low

MOBILITY IN SOIL:

CHEMICAL NAME	SOIL/WATER PARTITION COEFFICIENT (K_{OC})
Isophoronediamine	Not available
Benzyl Alcohol	Not available
2-methyl-1,5-pentanediamine	Not available
N-(2-aminoethyl)piperazine	Between 150 and 500
Polyoxypropylenetriamine	Not available
Nonylphenol	Not available

OTHER ADVERSE EFFECTS: Additional information is not available

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See section 8 for recommendations on the use of personal protective equipment.

SECTION 14. TRANSPORTATION INFORMATION

UN NUMBER: UN2735

UN PROPER SHIPPING NAME:
Amines, Liquid, Corrosive, N.O.S., (Polyoxypropylenetriamine/Isophoronediamine Solution)

TRANSPORT HAZARD CLASS:

U.S. DOT HAZARD CLASS:	8
CANADA TDG HAZARD CLASS:	8
EUROPE ADR/RID HAZARD CLASS:	8
IMDG CODE (OCEAN) HAZARD CLASS:	8

ICAO/IATA (AIR) HAZARD CLASS: 8

PACKING GROUP: III

ENVIRONMENTAL HAZARDS:

MARINE POLLUTANT: No

HAZARDOUS SUBSTANCE (USA): No

SPECIAL PRECAUTIONS FOR USER: Information is not available.

TRANSPORTING IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE: Information is not available.

LABEL FOR CONVEYANCE:

OTHER INFORMATION: ORM-D Consumer Commodity in 1 gal or less containers

SECTION 15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT IN QUESTION:

U.S. Superfund Amendments and Reauthorization Act (SARA) – SARA Section 313	Nonylphenol (CAS 84852-15-3)
EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV – List of substances subject to authorization, Substances of very high concern	None of the components are listed.
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Nonylphenol (CAS 84852-15-3)

OTHER REGULATIONS: Additional information is not available.

CHEMICAL INVENTORIES:

Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ELINCS):	N
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed.

SECTION 16. OTHER INFORMATION

REVISION DATE: November 9, 2017

LEGEND: ACGIH: American Conference of Governmental Industrial Hygienists
ADR/RID: European dangerous goods transport road and rail regulations
CAS No: Chemical Abstract Service Registry Number
DOT: Department of Transportation (U.S.)
GHS: Globally Harmonized System of Classification and Labeling of Chemicals

IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods code
OEL: Occupational Exposure Limits
OSHA: Occupational Safety and Health Administration (U.S.)
PEL: Permissible Exposure Limit
RQ: Reportable Quantity
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit (15 minute Time Weighted Average)
TDG: Canadian Transportation of Dangerous Goods Act and Regulations
UN: United Nations
U.S.: United States

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