1. Product and Company Identification

Product Name: Bridge Deck Patch Coat (A-Side)

Bridge Preservation, LLC
686 South Adams Street
Kansas City, KS 66105

www.bridgepreservation.com

Company Phone: (913) 321-9000

CHEMTREC 24 hour Emergency USA: (800) 424-9300
CHEMTREC 24 hour International: (703) 527-3887

Product Use: Primer / Sealer / Coating / Lining
Not recommended for: Non Professional Use

2. Hazards Identification

Signal Word: Danger

GHS Ratings:

Inhalation Toxicity	Acute Tox. 2	Gases>100+<=500ppm, Vapors>0.5+<=2mg/l, Dusts&mists>0.05+<=0.5mg/l
Skin corrosive	1C	Destruction of dermal tissue: Exposure < 4 hours Observation < 14 days, visible necrosis in at least one animal.
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5
Respiratory sensitizer	1	Respiratory sensitizer.
Skin sensitizer	1	Skin sensitizer.
Organ toxin single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation.

GHS Hazards

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

GHS Precautions

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.

P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P285	In case of inadequate ventilation wear respiratory protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P320	Specific treatment is urgent (see Section 4 of the SDS).
P321	Specific treatment (see Section 4 of the SDS).
P363	Wash contaminated clothing before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P405	Store locked up.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P501	Dispose of contents/container according to Section 13 of the SDS.

3. Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	39323-37-0	30 - 60%
Isophorone Diisocyanate	4098-71-9	15 - 40%

4. First Aid Measures

Inhalation: Remove to fresh air if effects occur. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Consult a physician or transport to a medical facility.

Eye Contact: Immediately flush eyes with large quantities of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Skin Contact: Wash immediately and thoroughly with soap and lukewarm flowing water. Remove contaminated clothing while washing. Seek medical attention if irritation develops and persists. This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with

other respiratory irritants or sensitizers. Cholinesterase inhibition has been noted in human exposure but is not of benefit in determining exposure and is not correlated with signs of exposure. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. Fire Fighting Measures

Flash Point: >160 C (>320 F)

Flammable Properties: Product is not considered a fire hazard, but will burn if ignited. NFPA Flammability Class: III B (Combustible liquid).

Suitable Extinguishing Media: Carbon dioxide, dry chemical, water fog or fine spray. Alcohol resistant foams are preferred, general purpose synthetic foams or protein foams may function, but will not be as effective.
Unsuitable Extinguishing Media: Do not use direct water stream, as it may spread fire.

Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides, isocyanates, hydrogen cyanide and other unidentified toxic and/or irritating compounds.

Fire Fighting: Stay upwind and keep people away. Isolate fire and deny unnecessary entry. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible, as it may cause environmental damage. Review section 6 and section 12 of this SDS.

Protection of Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA) and approved protective clothing (helmet, coat, trousers, boots and gloves). If contact is likely, use full chemical resistant fire fighting clothing with SCBA.

6. Accidental Release Measures

Personal Precautions: Put on appropriate personal protective equipment (see section 8).
Environmental Precautions: Prevent spilled material from contact with soil, drains and sewers.

Methods for Containment: Contain by diking with sand, earth or other suitable material.

Methods for Clean-up: Absorb spill with an inert material, use non-sparking tools to place into labeled waste container for disposal.

7. Handling and Storage

Handling: Wear appropriate personal protective equipment (see section 8). Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Irritation of the eyes, nose and throat (or odor) are not adequate to prevent overexposure from inhalation. This material may produce asthmatic sensitization with a single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Persons with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Do not ingest. Avoid prolonged or repeated contact with skin. May cause allergic skin reaction, persons with a history of skin sensitization should not be employed in any process in which this product is used. Wash thoroughly with soap and water after handling. Do not handle or store near flame, heat or strong oxidants. Keep away from sources of ignition and hot metal surfaces.

Storage: Store original unopened containers in a sheltered area between 60°F and 80°F (15°C and 27°C) at atmospheric pressure. Do not store in direct sunlight. Keep containers closed when not in use.

8. Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits

Poly[oxy(methyl-1,2-ethanedyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane 39323-37-0	OELs not established	OELs not established	Not Established
Isophorone Diisocyanate 4098-71-9	Not Established	0.005 ppm TWA	NIOSH: 0.005 ppm TWA; 0.045 mg/m3 TWA 0.02 ppm STEL; 0.180 mg/m3 STEL

Engineering Controls: General mechanical ventilation is sufficient for most conditions. Control airborne levels below the exposure guidelines, if established.

Local exhaust ventilation may be necessary for some operations.

General Hygiene Considerations: Wash thoroughly after handling and before eating, drinking or smoking.

Eye/face Protection: Use chemical safety glasses, splash-proof eye goggles or goggles with full faceshield.

Skin Protection: Use neoprene, nitrile/butadiene rubber or other impermeable chemical resistant gloves to prevent skin irritation. If potential for skin contact is present, wear impervious, long-sleeved, body covering clothing and rubber boots.

Respiratory Protection: Local exhaust should be used to maintain levels below the TLV whenever this isocyanate is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne isocyanate should become part of the overall employee exposure characterization program. NIOSH, OSHA and others have developed sampling and analytical methods to verify exposure levels.

Airborne isocyanate concentrations greater than the appropriate standard/guideline can occur in inadequately ventilated environments when it is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If sanding or grinding on cured material, use an APR fitted with HEPA filters or a dust mask.

If an APR is selected, the following conditions must be met:

a) use a properly fitted NIOSH approved respirator

b) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or

c) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program, and

d) the airborne isocyanate concentration must be no greater than 10 times the appropriate standard/guideline. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Contaminated Gear: Remove contaminated clothing and shoes while washing. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

9. Physical and Chemical Properties

Appearance Clear to pale yellow	**Odor** Mild
Odor Threshold No data found	**Physical State** Liquid
pH No data found	**Melting/Freezing Point** No data found
Boiling Point 287°C	**Boiling Range** No data found
Flash Point 320°F,160°C	**Evaporation Rate** No data found
Flammability (solid, gas) No data found	**LEL/UEL** No data found
Vapor Pressure No data found	**Vapor Density** No data found
Specific Gravity 0.9 - 1.1	**Solubility in Water** No data found

Partition Coefficient (n-octanol/water) No data found	**Autoignition Temperature** No data found
Decomposition Temperature No data found	**Viscosity** No data found
Lbs VOC/Gallon Less Water 0.0	

10. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions (see Section 7).
Conditions to Avoid: Avoid temperatures above 450 deg F (230 deg C), potential violent decomposition may occur. Avoid contact with water, as material reacts with water, releasing carbon dioxide which can cause rapid pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible Materials: Strong acids, bases, or oxidizing agents. Avoid unintended contact with amines, alcohols, water, moist air and metals such as aluminum, brass, copper, tin, zinc and galvanized metals.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides, isocyanates, hydrogen cyanide and other unidentified toxic and/or irritating compounds.

Hazardous polymerization will not occur.

11. Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 0.07 mg/L

Component Toxicity

4098-71-9 Isophorone Diisocyanate
Oral LD50: 4,814 mg/kg (Rat) Inhalation LC50: 0.031 mg/L (Rat)

Acute: Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Causes severe skin irritation with symptoms of reddening, itching, and swelling. May cause necrosis and possible scarring. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Chronic: As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanates at levels well below the exposure limits or guidelines. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent.

Prolonged contact with skin can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

Prolonged vapor contact with the eyes may cause conjunctivitis.

Delayed: Symptoms affecting the respiratory tract can also occur several hours after overexposure.

Likely Routes of Exposure:

Inhalation Skin Contact Eye Contact

Target Organs

May cause damage to the following organs:

Eyes Skin Respiratory System

Effects of Overexposure

CAS Number	Description	% Weight	Carcinogen Rating
None			No data found

12. Ecological Information

Component Ecotoxicity

Isophorone Diisocyanate 72 Hr EC50 Desmodesmus subspicatus: 118.7 mg/L

13. Disposal Considerations

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations. The preferred method for disposal of uncontaminated product is by recycling, reclaiming, incineration or other thermal destruction device using a licensed and permitted waste disposal contractor.

14. Transport Information

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT	Isocyanates, toxic, n.o.s., (Isophorone Diisocyanate)	UN2206	III	6.1
ICAO/IATA	Isocyanates, toxic, n.o.s., (Isophorone Diisocyanate)	UN2206	III	6.1
IMDG	Isocyanates, toxic, n.o.s., (Isophorone Diisocyanate)	UN2206	III	6.1
TDG	Isocyanates, toxic, n.o.s., (Isophorone Diisocyanate)	UN2206	III	6.1

15. Regulatory Information

USA Federal: This SDS has been prepared in compliance with the Occupational Safety and Health Act (OSHA) Hazard Communication Standard (29 CFR 1910.1200). This product is considered to be a hazardous chemical under that standard. The specific chemical identity and/or exact percentage of any proprietary ingredient(s) may be withheld as a trade secret, pursuant to the standard.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): To the best of our knowledge, this product contains the following chemicals which are known to the State of California to cause cancer, developmental or reproductive toxicity at levels which require warning under this statute:

- None

USA Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - section 103 Hazardous Substances Reportable Quantities (RQs): To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 302.4:

- None

Massachusetts Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

4098-71-9 Isophorone Diisocyanate 15 to 40 %

New Jersey Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

4098-71-9 Isophorone Diisocyanate 15 to 40 %

Pennsylvania Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

4098-71-9 Isophorone Diisocyanate 15 to 40 %

USA Resource Conservation and Recovery Act (40 CFR 261): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- None

USA Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 313 Toxic Release Inventory (TRI) Form R: To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 372.65:

4098-71-9 Isophorone Diisocyanate 15 to 40 %

USA Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 302 Extremely Hazardous Substances Threshold Planning Quantities (TPQs): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

4098-71-9 Isophorone Diisocyanate 15 to 40 %

USA Toxic Substances Control Act (TSCA) - section 12(b): To the best of our knowledge, this product contains the following chemicals above the de minimus concentration(s) which requires notification to the Environmental Protection Agency (EPA) per 40 CFR 707, subpart D, if any person intends to export:

- None

Country	Regulation	All Components Listed
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Canada Domestic Substance List	Yes
Canada	Canada Non-Domestic Substances List (NDSL)	No
China	China Inventory of Existing Chemical Substances	Yes
EU	EU REACH List of Registered Intermediates	No
EU	EU REACH List of Pre-Registered Substances	Yes
EU	EU REACH List of Registered Substances	No
Japan	Japanese Existing and New Chemical Substances List	No
South Korea	South Korea Existing Chemicals Inventory	Yes
Philippines	Philippines Inventory of Chemicals and Chemical	Yes
USA	USA TSCA Inventory list section 8(b)	Yes

- None

16. Other Information

Legend

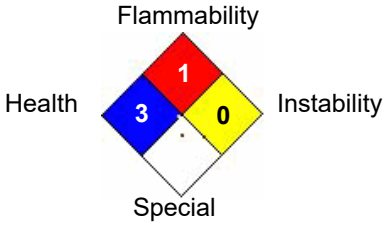
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
ADR/RID	European Agreement for transport of dangerous goods by road (ADR) and by rail (RID)
CAS No.	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, AKA "Superfund"
DOT	Department of Transportation (USA)
HCS	OSHA Hazard Communication Standard (29 CFR 1910.1200)
IARC	International Agency for Research on Cancer

IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
IMDG	International Maritime Dangerous Goods
MSHA	Mine Safety and Health Administration
N.A.	Not Applicable
N.D.	Not Determined
N.E.	Not Established
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration (USA)
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986 (40 CFR)
STEL	Short Term Exposure Limit (15 minute Time Weighted Average)
TDG	Canada Transport of Dangerous Goods regulations
TLV	Threshold Limit Value
TWA	Time Weighted Average
WHMIS	Canada Workplace Hazardous Materials Information System

Hazardous Material Information System (HMIS)

HMIS & NFPA Hazard Rating Legend
*** = Chronic Health Hazard**
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



Disclaimer

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PUPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

Date Prepared: 3/24/2020 Reviewer Revision