

Section 1 - Identification**Product Name: Exo-Coat**

A liquid polyurethane specialty coating and bonding agent.

Revised: 2/8/16

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|---|--|---|
| Northern Radiator 2701 4 th Ave SW Willmar, MN 56201 U.S.A. | 1-800-328-8900 1-320-235-2288 1-320-235-2297 Fax northern@1nfs.com | 24 HOUR EMERGENCY RESPONSE 1-800-255-3924 (U.S. & Canada) |
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Section 2 - Hazards Identification

Hazard categories: Flammable Liquid 3, Acute Toxicity-Dermal 4, Acute Toxicity-Inhalation 4, Skin corrosion/Irritation 2, Eye Corrosion/Irritation 2A, Respiratory Sensitization 1, Carcinogenicity 2, Reproductive Toxicity 2, Specific Target Organ Toxicity-Single Exposure 3 (respiratory), Specific Target Organ Toxicity-Repeated Exposure 1 (central nervous system, liver, kidneys), Aspiration Hazard 1

Hazard statements:

Flammable liquid and vapor.

Harmful in contact with skin. Harmful if inhaled.

Causes skin irritation. Causes serious eye irritation.

Suspected of causing cancer. May cause respiratory irritation.

Suspected of damaging fertility or the unborn child.

May be fatal if swallowed and enters airways.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Causes damage to organs (respiratory tract, central nervous system, kidney, liver) through prolonged or repeated exposure.



Signal word: Danger

Pictogram: Flame, Exclamation and Health

Precautionary statements**Prevention**

Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Keep container tightly closed.

Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapors.

Wear protective gloves such as Nitrile rubber and eye protection such as safety glasses with side shields.

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Use outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Response**IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs: Get medical attention.**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER.**IF SWALLOWED:** Immediately call a POISON CENTER. Rinse mouth. Do not induce vomiting.**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.**IF exposed or concerned:** Call a POISON CENTER.**In case of fire:** Use B or C fire extinguisher.**Storage:** Store in well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.**Disposal:** Dispose of contents in accordance with local, regional, national, and international regulations.**Section 3 - Composition / Information on Ingredients**

| Ingredient | C.A.S. No. | Concentration |
|---|---------------|---------------|
| Polyisocyanate Prepolymer based on MDI | Trade secret* | 51% |
| m-Xylene | 108-38-3 | 10% |
| 4,4'-Diphenylmethane Diisocyanate (MDI) | 101-68-8 | 10% |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | 5% |
| p-Xylene | 106-42-3 | 4% |
| Ethylbenzene | 100-41-4 | 4% |

| Ingredient | C.A.S. No. | Concentration |
|--|------------|---------------|
| Polymeric Diphenylmethane Diisocyanate (pMDI) | 9016-87-9 | 3% |
| o-Xylene | 95-47-6 | 3% |
| Carbon black, amorphous | 1333-86-4 | 3% |
| Ethene, homopolymer | 9002-88-4 | 2% |
| Diphenylmethane Diisocyanate (MDI) Mixed Isomers | 26447-40-5 | 2% |
| Solvent naphtha (petroleum), medium aliphatic | 64742-88-7 | 2% |
| Toluene | 108-88-3 | 0.11% |

The remaining ingredients are not reportable as described in Appendix D to Sec. 1910.1200 Table D.1.

* This is not a trade secret of Damon Industries, it is a trade secret of the manufacturer of the ingredient.

Section 4 - First Aid Measures

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Skin Contact: Immediately wash the exposed skin with soap and water. If the product dries it may have to wear off. If irritation develops and persists, get medical attention.

Inhalation: Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

Ingestion: If the product is swallowed, do NOT induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.

Notes to Physician: Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision.

Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.

Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide or foam. Water spray for large fires and to cool containers.

Special Fire Fighting Procedures: Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Unusual Fire And Explosion Hazards: Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture.

Hazardous Decomposition Products from Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Isocyanate, Isocyanic Acid.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wipe up spills with rags or towels. Spilled material will quickly begin to harden and adhere to almost anything.

Section 7 - Handling and Storage

Store and use at temperatures between 64° and 104° F. Thickness of the product slows solvent evaporation, but vapors in the work area can still become explosive at or above the flash point of 79° F. Do not use near flame, sparks or electric motors. In dryer climates use caution against static discharge igniting vapors by grounding and bonding can and work. The safest place to work is outdoors if possible. Self life of unopened product is guaranteed to be 6 months from date on lid. Unopened product may still be good for up to 2 years. Opened and resealed cans may harden in a few weeks or months. Humidity hastens hardening. The lid on resealed cans may pop off with near explosive force at any time, depending on the amount of moisture that was absorbed by the product while the lid was off. Use caution and eye protection when handling or opening resealed cans.

Section 8 - Exposure Controls / Personal Protection

| Ingredient | C.A.S. No. | Concentration | TWA(source) | STEL | Ceiling |
|---|---------------|---------------|-----------------------------|----------------|-----------------|
| Polyisocyanate Prepolymer based on MDI | Trade secret* | 51% | 0.02 ppm(1) 0.005 ppm(3) | - | - |
| m-Xylene | 108-38-3 | 10% | 100 ppm(1,2,3,4) | 150 ppm(2,3,4) | - |
| 4,4'-Diphenylmethane Diisocyanate (MDI) | 101-68-8 | 10% | 0.005 ppm(2,3,4) | - | 0.02 ppm(1,2,4) |

| Ingredient | C.A.S. No. | Concentration | TWA(source) | STEL | Ceiling |
|--|------------|---------------|--|-----------------------------|-------------|
| 2-methoxy-1-methylethyl acetate | 108-65-6 | 5% | 50 ppm (AIHA WEEL) | - | - |
| p-Xylene | 106-42-3 | 4% | 100 ppm(1,2,3,4) | 150 ppm(2,3,4) | - |
| Ethylbenzene | 100-41-4 | 4% | 100 ppm(1,2,3,4) | 125 ppm(2,3,4) | - |
| Polymeric Diphenylmethane Diisocyanate (pMDI) | 9016-87-9 | 3% | 0.005 ppm(4) | - | 0.02 ppm(4) |
| o-Xylene | 95-47-6 | 3% | 100 ppm(1,2,3,4) | 150 ppm(2,3,4) | - |
| Carbon black (bound in liquid mixture) | 1333-86-4 | 3% | Only limits for airborne, unbound particles of respirable size are known. This form is not respirable. | | |
| Polyethylene | 9002-88-4 | 2% | No published limits are known. | | |
| Diphenylmethane Diisocyanate (MDI) Mixed Isomers | 26447-40-5 | 2% | No published limits are known. | | |
| Solvent naphtha (petroleum), medium aliphatic | 64742-88-7 | 2% | No published limits are known. | | |
| Toluene | 108-88-3 | 0.11% | 50 ppm(3), 100ppm(2,4) 200 ppm(1) | 150 ppm(2,4), 300 ppm(1) | 500 ppm(1) |

(1)=OSHA (2)=NIOSH (3)=ACGIH (4)=CANADA TWA=8 hour Time Weighted Average STEL=15 minute TWA Ceiling=Instantaneous
 Ingredients not shown either have no known limits or are below reportable levels in section 3 above.

Ventilation: None required when used as directed. When used as directed a change of room air of 4 times per hour should be adequate.

Respiratory Protection: None expected when used with plenty of ventilation. In enclosed spaces or if the above exposure limits will be exceeded wear a NIOSH approved respirator with an organic vapor cartridge.

Gloves: Wear resistant gloves such as neoprene, Nitrile or PVC. Do not use disposable latex. Disposable Nitrile are fine.

Eye Protection: If eye contact through splattering is possible, wear safety glasses with side shields.

Other Protective Equipment: Use a rubber or plastic apron or other protective clothing to prevent contact with clothing. Product will not wash out of clothing. Removal of dried product may be possible with acetone or methyl ethyl ketone if they do not harm to underlying material.

Section 9 - Physical and Chemical Properties

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| Appearance and Odor: A black liquid with a sweet, solvent-like odor. | |
| Odor Threshold: Not Available | Vapor Pressure: 6.5 mmHg @ 68 °F. |
| pH: Not Applicable | Vapor Density: 3.7 (Air = 1.0) |
| Melting Point: Not Available | Relative Density (Specific Gravity): 1.045 |
| Freezing Point: Not Available | Solubility(ies): Water: Insoluble Toluene: 100% |
| Boiling Point, Initial: 281° F. | Partition coefficient: Not Available |
| Boiling Range: Not Available | Auto-ignition Temperature: Not Available |
| Flash Point: 79° F. (ASTM D-56 closed cup) | Decomposition Temperature: Not Available |
| Evaporation Rate: 0.6 (1=N-Butyl Acetate) | Viscosity: Same as water.- |
| Flammability: (solid, gas): Not Applicable | Volatiles Percent: 27% |
| Upper Explosive Limit: 1.1% | V.O.C.: 20% - 108 grams/liter |
| Lower Explosive Limit: 6.6% | |

Section 10 - Stability and Reactivity

Incompatibility: Oxidizers.

Hazardous Decomposition Products: None

Section 11 - Toxicological Information

Primary Routes of Entry: X Skin contact; X Skin absorption; X Inhalation; X Ingestion

Potential Health Effects:

Eyes - causes severe irritation, redness, tearing and blurred vision.

Skin - may cause irritation. Repeated contact may cause dermatitis and sensitization on persons with sensitive skin.

Swallowing - results in irritation of mucous membranes, nausea, vomiting and diarrhea.

Breathing - excessive breathing of vapors may cause irritation, sensitization, central nervous system damage, kidney or lung damage and in very extreme cases of over-exposure unconsciousness or death.

Carcinogenicity

None of the ingredients have a higher level of concern than the following:

IARC 3 - ~~%Unclassifiable as to carcinogenicity to humans+, on a scale where 1 is a %human carcinogen+, 2A is %probably a human carcinogen+, 2B is %possibly a human carcinogen+, and 4 is %probably not a human carcinogen+.~~

ACGIH A4 - ~~%Not classifiable as a human carcinogen+, on a scale where A1 is a %confirmed human carcinogen+, A2 is a %suspected human carcinogen+, A3 is a %confirmed animal carcinogen with unknown relevance to humans+, and A5 is %not suspected as a human carcinogen+.~~

None of the ingredients are listed as carcinogens by OSHA or NTP.

Section 12 - Ecological Information

Do not dispose of in the environment. High toxicity to aquatic life. Once hardened it is basically inert.

Section 13 - Disposal Considerations

Waste Disposal Method: Until the product dries the material is combustible. Once dry, product, rags and towels may be disposed of safely in regular trash.

Section 14 - Transport Information

D.O.T. Hazard Class: Gallons and larger - PAINT, 3, UN 1263, P.G. II. Quarts and smaller - ORM-D.

Section 15 - Regulatory Information

The components of this product are on the TSCA inventory of chemical substances.

Section 313 Supplier Notification: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and CFR 372.

| <u>Chemical Name</u> | <u>C.A.S. No.</u> | <u>% By Weight</u> | <u>Lbs./Gallon</u> |
|--|-------------------|--------------------|--------------------|
| 4,4'-Diphenylmethane Diisocyanate | 101-68-8 | 9.9% | 0.78 |
| Ethylbenzene | 100-41-4 | 4.2% | 0.34 |
| Polymeric Diphenylmethane Diisocyanate | 9016-87-9 | 3.3% | 0.26 |
| m-Xylene | 108-38-3 | 10.2% | 0.81 |
| o-Xylene | 95-47-6 | 3.2% | 0.23 |
| p-Xylene | 106-42-3 | 4.4% | 0.35 |
| Toluene | 108-88-3 | 0.1% | 0.009 |

California Proposition 65 Notification: This product contains chemicals known to the state of California to cause cancer.

| <u>Chemical Name</u> | <u>C.A.S. No.</u> | <u>% By Weight</u> |
|----------------------|-------------------|--------------------|
| Ethylbenzene | 100-41-4 | 4.2% |
| Toluene | 108-88-3 | 0.111% |

Section 16 - Other Information

NFPA: H:3 F:2 I:0 **HMIS® III:** H:2 F:2 P:0 These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

Replaces sheet dated 2/26/11. GHS changes made.

The information accumulated herein is believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.