

Material Safety Data Sheet

Freeman Repro Laminating Resin Part A

Date of Preparation: January 4, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman Repro Laminating Resin Part A
Chemical Family: Polyol
CAS Number: N/A
Other Designations: N/A
General Use: N/A
Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,
Emergency phone number 1-800-424-9300

HMIS	
H	1
F	2
R	0
PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Urethane Polyol	Proprietary
Aromatic Solvent	Blend
Titanium Dioxide	13463-67-7

Ingredient	OSHA		ACGIH		Vapor Pressure
	PEL	STEL	TLV	STEL	
Urethane Polyol	none estab.	none estab.	none estab.	none estab.	N/A
Aromatic Solvent	100 ppm	none estab.	25 ppm	none estab.	1.7 mm Hg @ 68°F
Titanium Dioxide	5 mg/m ³	15 mg/m ³	10 mg/m ³	None estab.	N/A

Section 3 Hazards Identification

Emergency Overview

Combustible, causes eye, skin, and respiratory irritations.

Potential Health Effects

Primary Entry Routes: Skin; Inhalation from heated vapors.

Acute Effects:

Inhalation: Irritates the respiratory tract

Eye: Causes irritation

Skin: Causes irritation

Ingestion: Swallowing can cause abdominal irritation, nausea, vomiting, and diarrhea.

Medical Conditions Aggravated by Long-Term Exposure: Persons with severe skin problems should avoid use.

Chronic Effects: No known chronic effects associated with this material.

Carcinogenicity: IARC has classified Titanium Dioxide to be a Class 2B suspect human carcinogen

Freeman Repro Laminating Resin Part A

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

Eye Contact: Flush with plenty of water for 15 minutes and get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Ingestion: If conscious, give 2-4 glasses of water to drink. Do not induce vomiting. Get medical attention.

Section 5 Fire Fighting Measures

Flash Point: 150°F (66°C)

Flash Point Method: SETA

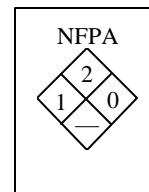
LEL: Not established

UEL: Not established

Extinguishing Media: Foam, water fog, CO₂, or dry chemical

Fire-Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.



Section 6 Accidental Release Measures

Spill/Leak Procedures: Stop spill at source. Dike area and contain. Clean up remainder with absorbent materials such as sand or vermiculite. Mop up and dispose of.

Section 7 Handling and Storage

Handling & Storage: Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures.. When resealing cans, use a nitrogen purge (Polyurethane Protectant). Keep container tightly closed and upright when not in use to prevent leakage.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

Respiratory Protection: Use a NIOSH approved respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 Physical and Chemical Properties

Appearance and Odor: White liquid, mild odor

Vapor Pressure: Not determined

Vapor Density (Air=1): Not determined

VOC Content: 1.10 lbs/gal

Specific Gravity (H₂O=1, at 4 °C): 1.92

Water Solubility: Slight

Boiling Point: Not determined

% Volatile: 5-10%

Evaporation Rate: Not determined

pH: Not determined

Freeman Repro Laminating Resin Part A

Section 10 Stability and Reactivity

Stability: Stable.

Conditions to Avoid: Contamination with materials containing active NCO compounds, excessive heat for prolonged period.

Chemical Incompatibilities: Strong oxidizing agents, acids, metal-organic compounds.

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur. Avoid inadvertent mixture of A and B parts.

Section 11 Toxicological Information

Acute Inhalation Exposure Effects: Respiratory irritant.

Skin Irritation: Irritant.

Eye Irritation: Irritant.

Carcinogenicity: IARC has classified Titanium Dioxide to be a Class 2B suspect human carcinogen

Section 12 Ecological Information

No Known evidence of adverse effects from available information

Section 13 Disposal Considerations

Disposal: Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Liquid Plastic, N.O.I., Non-Regulated

Section 15 Regulatory Information

US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA 311/312 Codes: Acute Health, Fire

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

Xylenes	CAS # 1330-20-7	< 0.1 %
Naphthalene	CAS # 91-20-3	< 0.1 %

TSCA Inventory Status: All ingredients are listed on the TSCA inventory.

State Regulations:

CA Proposition 65 Naphthalene (CAS # 91-20-3) is listed as cancer hazard.

May contain trace amounts of xy lene (CAS # 1330-20-7) and naphthalene (CAS # 91-20-3) which are on the New Jersey, Pennsylvania and Massachusetts Right to Know lists.

Titanium Dioxide (CAS # 13463-67-7) and Barium Sulfate (CAS # 7727-43-7) are listed on the New Jersey and Pennsylvania Right to know lists.

Freeman Repro Laminating Resin Part A

Section 16 Other Information

Disclaimer: The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Material Safety Data Sheet

Freeman Repro Laminating Resin Part B

Date of Preparation: January 4, 2010

Section 1 Chemical Product and Company Identification

HMIS	
H	3
F	2
R	1
PPE Sec.8.	

Product/Chemical Name: Freeman Repro Laminating Resin Part B
Chemical Family: Isocyanate
CAS Number: N/A
Other Designations: N/A
General Use: N/A
Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011
 Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,
 Emergency phone number 1-800-424-9300

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Polymeric Diphenylmethane Diisocyanate	9016-87-9
4,4'-Diphenylmethane Diisocyanate	101-68-8
Aromatic Solvent	Blend
Titanium Dioxide	13463-67-7

Ingredient	OSHA		ACGIH		Vapor Pressure
	PEL	STEL	TLV	STEL	
Polymeric Diphenylmethane Diisocyanate	none estab.	none estab.	none estab.	none estab.	N/A
4,4'-Diphenylmethane Diisocyanate	0.02 ppm	none estab.	0.005 ppm	none estab.	N/A
Aromatic Solvent	100 ppm	none estab.	25 ppm	none estab.	1.7 mm Hg @ 68°F
Titanium Dioxide	5 mg/m ³	15 mg/m ³	10 mg/m ³	none estab.	N/A

Section 3 Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Combustible, Causes skin, eye and respiratory irritation., May cause allergic skin and respiratory reactions

Potential Health Effects

Primary Entry Routes: Skin; Inhalation from heated vapors.

Inhalation: Irritation to eyes, skin, and respiratory tract. May cause asthmatic-like symptoms.

Eye: Eye irritation may include tearing, reddening, and swelling.

Skin: Skin irritation may include reddening, swelling, rash, scaling or blistering, and in some cases, skin sensitization.

Ingestion: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Medical Conditions Aggravated by Long-Term Exposure: Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity) skin allergies, eczema.

Freeman Repro Laminating Resin Part B

Section 3 Hazards Identification continued

Chronic Effects

Inhalation: As a result of previous repeated overexposures, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Sensitization can either be temporary or permanent.

Eye: None found.

Skin: Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors.

Ingestion: None found.

Carcinogenicity: IARC has classified Titanium Dioxide to be a Class 2B suspect human carcinogen

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

Eye Contact: Flush with plenty of water for 15 minutes and get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Ingestion: If conscious, give 2-4 glasses of water to drink. Do not induce vomiting. Get medical attention.

Section 5 Fire Fighting Measures

Flash Point: 150 °F (66 °C)

Flash Point Method: SETA

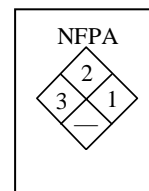
LEL: Not established

UEL: Not established

Extinguishing Media: Foam, water, CO₂, or dry chemical

Fire-Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.



Section 6 Accidental Release Measures

Spill /Leak Procedures: Stop spill at source. Dike area and contain. Clean up remainder with absorbent materials such as sand or vermiculite. Mop up and dispose of.

Section 7 Handling and Storage

Handling & Storage: Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures.. When resealing cans, use a nitrogen purge (Polyurethane Protectant). Keep container tightly closed and upright when not in use to prevent leakage.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

Respiratory Protection: Use a NIOSH approved respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Freeman Repro Laminating Resin Part B

Section 9 Physical and Chemical Properties

Appearance and Odor: Tan liquid; mild odor

Vapor Pressure: Not determined

Vapor Density (Air=1): Not determined

VOC Content: 0.77 lbs/gal

Specific Gravity (H₂O=1, at 4 °C): 1.92

Water Solubility: Reacts with water

Boiling Point: Not determined

% Volatile: 5-10%

Evaporation Rate: Not determined

pH: Not determined

Section 10 Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Contamination with moisture and other products that react with isocyanates. Avoid prolonged heating over 160F or storing below 75F. Avoid water contamination.

Incompatibility: Water, alcohols, strong oxidizing agents, strong bases, acids, metal-organic compounds.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors.

Hazardous Polymerization: May occur. Avoid contact with moisture or other material, which react with isocyanates. May occur at temperatures above 400° F (204° C)

Section 11 Toxicological Information

Acute Inhalation Exposure Effects: Respiratory irritant.

Sensitization: Causes allergic skin and respiratory sensitivity in some people.

Skin: Irritant.

Eye: Irritant.

Carcinogenicity: IARC has classified Titanium Dioxide to be a Class 2B suspect human carcinogen

Section 12 Ecological Information

No Known evidence of adverse effects from available information

Section 13 Disposal Considerations

Disposal: Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

Section 14 Transport Information

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SARA 311/312 Codes: Acute Health, Fire.

Freeman Repro Laminating Resin Part B

Section 15 Regulatory Information continued

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

Polymeric Diphenylmethane Diisocyanate	CAS #9016-87-9	12.0 – 15.0 %
4, 4' Diphenylmethane Diisocyanate	CAS# 101-68-8	3.0 – 4.0 %
Xylenes	CAS # 1330-20-7	< 0.1 %
Naphthalene	CAS # 91-20-3	< 0.1 %

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

State Regulations:

CA Proposition 65: Naphthalene (CAS # 91-20-3) is listed as a cancer hazard.

4,4' Methylene bis(phenylisocyanate) CAS # 101-68-8 may be found on both the New Jersey and the Pennsylvania Right to Know lists.

May contain trace amounts of xylene (CAS # 1330-20-7) and naphthalene (CAS # 91-20-3) which are on the New Jersey, Pennsylvania and Massachusetts Right to Know lists.

Titanium Dioxide (CAS # 13463-67-7) and Barium Sulfate (CAS #7727-43-7) are listed on the New Jersey and Pennsylvania Right to know lists.

Section 16 Other Information

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