

Safety Data Sheet

Repro Laminating Resin Part A

Date of Preparation: June 1, 2015

Section 1 Chemical Product and Company Identification

1.1 Product identifiers

Product name: Repro Laminating Resin Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: N/A

1.3 Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company

1101 Moore Road, Avon, OH 44011

Phone (440) 934-1902

FAX (440) 934-7200

1.4 Emergency telephone number

Emergency Phone (800) 424-9300

HMIS	
H	1
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PPE	
Sec. 8	

Section 2 Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Eye irritation, Category 2B

Flammable Liquid, Category 4

2.2 GHS Label elements, including precautionary statements



Signal word

Warning

Hazard statements

Combustible liquid.

Causes eye irritation.

Not classified as an environmental hazard under GHS criteria

Precautionary statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed when not in use.

Wear protective gloves/ eye protection/ face protection.

Avoid breathing mist, vapors or spray.

Do not eat, drink or smoke when using this product.

Response

If on skin: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical attention.

Wash contaminated clothing before reuse.

If in eyes: Rinse continuously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Repro Laminating Resin Part A

Section 2 Hazards Identification cont.

If eye irritation persists: Get medical attention.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3 Composition/Information on Ingredients

3.1 Substance

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

Section 4 First Aid Measures

4.1 Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately

If swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact: Causes eye irritation.

Inhalation: May cause irritation

Skin contact: Causes skin irritation

Ingestion: May cause irritation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation: No specific data

Ingestion: No specific data.

Skin contact: Adverse symptoms may include the following:

Irritation

Redness

Eye contact: Adverse symptoms may include the following:

Pain or irritation

Watering

Redness

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Symptomatic treatment and supportive therapy as indicated.

Repro Laminating Resin Part A

Section 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, or mist.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin. Provide appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point. No chemical incompatibilities.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Aromatic Solvent	100 ppm	none estab.	25 ppm	none estab.
Titanium Dioxide	5 mg/m ³	15 mg/m ³	10 mg/m ³	none estab.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

8.3 Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

Repro Laminating Resin Part A

Section 8 Exposure Controls/Personal Protection cont

8.4 Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

8.5 Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

8.6 Safety Stations

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

8.7 General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Opaque white liquid
Odor	Mild
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	1.15lbs/gal
Initial boiling point & boiling range	No data available
Flash Point(COC)	66°C (150°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative density (g/cc)	1.90±0.05
Water Solubility	Slight
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	3500 cps @ RT
Explosive Properties	None
Oxidizing Properties	None
% Volatile	5-10%

Repro Laminating Resin Part A

Section 10 Stability and Reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid

Heat and open flames.

10.5 Incompatible materials

Water, alcohols, amines, bases, and acids.

10.6 Hazardous decomposition products

Thermal oxidative decomposition can produce CO, and CO₂.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute Oral toxicity	Low toxicity
Acute Inhalation toxicity	Low toxicity
Acute Dermal toxicity	Low toxicity
Skin corrosion/irritation	Mild skin irritant
Serious eye damage/eye irritation	Mild eye irritant
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	

IARC Titanium Dioxide (CAS #13463-67-7) is considered a class 2B suspect human carcinogen.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity	Not expected to be a hazard
Specific target organ toxicity	
- single exposure	None expected
Specific target organ toxicity	
- repeated exposure	None expected

Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvB assessment	No data available

Repro Laminating Resin Part A

Section 13 Disposal Considerations

13.1 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

14.1 Shipping Name

DOT: Liquid Resin N.O.I Not Regulated

TDG: Liquid Resin N.O.I Not Regulated

IMDG: Liquid Resin N.O.I Not Regulated

IATA: Liquid Resin N.O.I Not Regulated

Section 15 Regulatory Information

15.1 US Federal Regulations

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

CERCLA Hazardous Substance (40 CFR 302.4): Listed/unlisted specific per RCRA Sec. 3001

SARA 311/312 Codes: Acute Health, Fire

SARA Toxic Chemical (40 CFR 372.65): None

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

15.2 State Regulations

This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

Titanium dioxide (CAS #13463-67-7) and barium sulfate (CAS #7727-43-7) may be found on both the New Jersey and the Pennsylvania Right to Know lists.

Section 16 Other Information

16.1 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.

Safety Data Sheet

Repro Laminating Resin Part B

Date of Preparation: June 1, 2015

Section 1 Chemical Product and Company Identification

1.1 Product identifiers

Product name: Repro Laminating Resin Part B

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: N/A

1.3 Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company

1101 Moore Road, Avon, OH 44011

Phone (440) 934-1902

FAX (440) 934-7200

1.4 Emergency telephone number

Emergency Phone (800) 424-9300

HMIS	
H	3
F	2
R	1
PPE	
Sec. 8	

Section 2 Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Acute toxicity (Inhalation), Category 4

Specific target organ toxicity, single exposure Category 3 (Respiratory System)

Respiratory sensitization, Category 1

Specific target organ toxicity, repeated exposure Category 1 (Respiratory Tract)

Skin irritation, Category 2

Skin sensitization, Category 1

Eye irritation, Category 2B

Flammable Liquid, Category 4

2.2 GHS Label elements, including precautionary statements



Signal word

Danger

Hazard statements

Combustible liquid.

Harmful if inhaled.

May cause respiratory irritation.

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

Causes damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Causes skin irritation.

May cause an allergic skin reaction.

Causes eye irritation.

Not classified as an environmental hazard under GHS criteria

Repro Laminating Resin Part B

Section 2 Hazards Identification cont.

Precautionary statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed when not in use.
Wear protective gloves/eye protection/face protection.
Avoid breathing mist, vapors or spray.
Do not eat, drink or smoke when using this product.
Wash skin and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
In case of inadequate ventilation wear respiratory protection

Response

If on skin: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
If experiencing respiratory symptoms: Get medical attention.
If in eyes: Rinse continuously with water for at least 15 minutes. Remove contact lenses, if present and easy to do.
If eye irritation persists: Get medical attention.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3 Composition/Information on Ingredients

3.1 Substance

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

Section 4 First Aid Measures

4.1 Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. The onset of the respiratory symptoms may be delayed for several hours after exposure.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Repro Laminating Resin Part B

Section 4 First Aid Measures cont.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately

If swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact: Causes eye irritation.

Inhalation: Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapor at levels above the occupational exposure limit could cause respiratory sensitization.

Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing

Skin contact: Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitization can be induced by skin contact with known respiratory sensitizers.

Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation: Adverse symptoms may include the following:

Respiratory tract irritation

Coughing

Wheezing and breathing difficulties

Asthma

Ingestion: No specific data.

Skin contact: Adverse symptoms may include the following:

Irritation

Redness

Eye contact: Adverse symptoms may include the following:

Pain or irritation

Watering

Redness

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

Section 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

Repro Laminating Resin Part B

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin.

Provide appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point. No chemical incompatibilities.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Polymeric Diphenylmethane Diisocyanate	None estab.	None estab.	None estab.	None estab.
4,4'-Diphenylmethane Diisocyanate	0.02 ppm	None estab.	0.005 ppm	None estab.
Aromatic Solvent	100 ppm	None estab.	25 ppm	None estab.
Titanium Dioxide	5 mg/m ³	15 mg/m ³	10 mg/m ³	None estab.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

8.3 Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

8.4 Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Repro Laminating Resin Part B

Section 8 Exposure Controls/Personal Protection cont.

8.5 Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

8.6 Safety Stations

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

8.7 General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Opaque white liquid
Odor	Mild
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	0.84 lbs/gal
Initial boiling point & boiling range	No data available
Flash Point(COC)	66°C (150°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative density (g/cc)	1.90±0.05
Water Solubility	Insoluble-slowly reacts with water to produce CO ₂
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	2000 cps @ RT
Explosive Properties	None
Oxidizing Properties	None
% Volatile	5-10%

Section 10 Stability and Reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

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

Repro Laminating Resin Part B

Section 10 Stability and Reactivity cont.

10.4 Conditions to avoid

Heat and open flames.

10.5 Incompatible materials

Water, alcohols, amines, bases, and acids.

10.6 Hazardous decomposition products

Thermal oxidative decomposition can produce CO, CO₂, oxides of nitrogen and traces of HCN.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute Oral toxicity	Low toxicity
Acute Inhalation toxicity	Low toxicity
Acute Dermal toxicity	Low toxicity
Skin corrosion/irritation	Mild skin irritant
Serious eye damage/eye irritation	Moderate irritant
Respiratory or skin sensitization	Skin sensitizer and respiratory sensitizer
Germ cell mutagenicity	No data available

Carcinogenicity

IARC	Titanium Dioxide (CAS #13463-67-7) is considered a class 2B suspect human carcinogen.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity	Not expected to be a hazard
Specific target organ toxicity - single exposure	Respiratory system
Specific target organ toxicity - repeated exposure	Respiratory system

Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

13.1 Disposal

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

Repro Laminating Resin Part B

Section 14 Transport Information

14.1 Shipping Name

DOT: Liquid Resin N.O.I Not Regulated

TDG: Liquid Resin N.O.I Not Regulated

IMDG: Liquid Resin N.O.I Not Regulated

IATA: Liquid Resin N.O.I Not Regulated

Section 15 Regulatory Information

15.1 US Federal Regulations

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

CERCLA Hazardous Substance (40 CFR 302.4): Listed/unlisted specific per RCRA Sec. 3001

SARA 311/312 Codes: Acute Health, Fire

SARA Toxic Chemical (40 CFR 372.65):

Polymeric Diphenylmethane Diisocyanate	CAS #9016-87-9	12.0 – 15.0 %
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4, 4' Diphenylmethane Diisocyanate	CAS#101-68-8	3.0 – 4.0 %
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TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

15.2 State Regulations

This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

4,4' Methylene bis(phenylisocyanate) (CAS #101-68-8), titanium dioxide (CAS #13463-67-7) and barium sulfate (CAS #7727-43-7) may be found on both the New Jersey and the Pennsylvania Right to Know lists.

Section 16 Other Information

16.1 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.