

**Section 1 Identification**

**Product identifiers**

Product name: Freeman 1066 Part A (Resin)

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

Identified uses: Isocyanate component of a polyurethane system

**Details of the supplier of the safety data sheet**

Freeman Manufacturing and Supply Company  
1101 Moore Road, Avon, OH 44011  
Telephone (440) 934-1902

HMIS	
H	2
F	1
R	0
PPE Sec. 8	

**24 Hour emergency telephone number: CHEMTREC (800) 424-9300**

**Section 2 Hazards Identification**

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

Acute Toxicity, Inhalation, Category 4  
Respiratory Sensitization, Category 1  
Skin Sensitization, Category 1

**GHS Label elements, including precautionary statements**



Signal word

Danger

**Hazard Statements**

Harmful if inhaled.  
May cause allergy, asthma symptoms, or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

**Precautionary Statements**

**Prevention**

Avoid breathing dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves.  
In case of inadequate ventilation wear respiratory protection.

**Response**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.  
If experiencing respiratory symptoms: Call a POISON CENTER or physician.  
IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.  
IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage**

Store in a well-ventilated, cool place. Keep container tightly closed when not in use.

**Section 2 Hazards Identification** continued

**Disposal**

Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

None known

**Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
4,4'Methylenedicyclohexyl Diisocyanate	5124-30-1	5 - 10

**Section 4 First Aid Measures**

**Description of first aid measures**

**General advice**

Move out of dangerous area. Get medical attention if symptoms occur. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

**If inhaled**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately. If symptoms occur, call a poison center or physician.

**In case of skin contact**

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if skin irritation persists

**In case of eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation persists.

**If swallowed**

Keep respiratory tract clear. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.

**Most important symptoms and effects, both acute and delayed**

None known

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

**Section 5 Fire-Fighting Measures**

**Extinguishing media**

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding environment.

Unsuitable extinguishing media: High volume water jet

**Specific hazards arising from the chemical**

No information available.

**Hazardous thermal decomposition products**

Carbon dioxide, carbon monoxide, nitrogen oxides, carbon oxides, hydrogen cyanide

**Advice for firefighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Section 6 Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures**

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Wear personal protective equipment.

**Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up**

Contain and collect spillage with non-combustible, absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust, vermiculite or diatomaceous earth) and place in container for disposal according to local regulations.

**Section 7 Handling and Storage**

**Precautions for safe handling**

Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure – obtain special instructions before use. Avoid contact with skin and eyes. Put on appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in compliance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this product is being used.

**Conditions for safe storage, including any incompatibilities**

Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**Section 8 Exposure Controls/Personal Protection**

**Components with workplace control parameters**

Component	Value Type	Control Parameters	Source
4,4'Methylenedicyclohexyl Diisocyanate	TWA	0.005 ppm	ACGIH

**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.

**Section 8 Exposure Controls/Personal Protection continued**

**Personal protective equipment**

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, wear tightly fitting safety goggles.

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Consult glove manufacturer for suitable protective gloves.

**Body protection**

Wear impervious clothing. Choose body protection based on the task being performed and the risks involved.

**Respiratory protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**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**

<b>Appearance</b>	Clear to slightly hazy liquid
<b>Odor</b>	Slight
<b>Odor threshold</b>	No data available
<b>pH</b>	No data available
<b>Boiling point</b>	>200°C (>392°F)
<b>Flash point (Pensky-Martens)</b>	>150°C (>302°F)
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/lower flammability</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor density</b>	No data available
<b>Relative density (g/cc)</b>	1.06
<b>Water Solubility</b>	Reacts violently with water
<b>Coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	>200°C (>392°F)
<b>Viscosity</b>	No data available

**Section 10 Stability and Reactivity**

**Reactivity**

No dangerous reaction known under conditions of normal use.

**Chemical stability**

Stable under recommended storage conditions.

**Section 10 Stability and Reactivity continued**

**Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**

None known.

**Incompatible materials**

Strong acids, strong bases, strong oxidizing agents, and water.

**Hazardous decomposition products**

Thermal oxidative decomposition can produce carbon oxides, and nitrogen oxides.

**Section 11 Toxicological Information**

**Information on toxicological effects**

**Acute oral toxicity** LD50: 18,200 mg/kg, Rat (4,4'-Methylenedicyclohexyl Diisocyanate)

**Acute inhalation toxicity** 4.84 mg/l, 4 h (test atmosphere: dust/mist, method: calculation)

**Acute dermal toxicity** LD50: >7,000 mg/kg, Rat ((4,4'-Methylenedicyclohexyl Diisocyanate)

**Skin corrosion/irritation** Irritating to skin

**Serious eye damage/eye irritation** Irritating to eyes

**Respiratory or skin sensitization** Sensitizing to skin and respiratory

**Germ cell mutagenicity** Not expected to be a hazard

**Carcinogenicity**

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed 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** No data available

**Specific target organ toxicity**

- **single exposure** May cause respiratory tract irritation

**Specific target organ toxicity**

- **repeated exposure** No data available

**Aspiration hazard** No data available

**Section 12 Ecological Information**

**Toxicity** No data available

**Persistence and degradability** No data available

**Bioaccumulative potential** No data available

**Mobility in soil** No data available

**Results of PBT & vPvB assessment** No data available

**Section 13 Disposal Considerations**

Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Do not re-use empty containers.

Dispose of in accordance with applicable regional, national and local laws and regulations.

**Section 14 Transport Information**

**DOT:** Not Regulated  
**IMDG:** Not Regulated  
**IATA:** Not Regulated

**Section 15 Regulatory Information**

**US Federal Regulations**

CERCLA: This material does not contain any components with a CERCLA Reportable Quantity  
SARA 311/312 Codes: Respiratory or skin sensitization, Acute toxicity (any route)  
SARA 313 Toxic Chemical: 4,4'-Methylenedicyclohexyl Diisocyanate 5124-30-1  
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Section 112 (40 CFR 61)

**U.S. Toxic Substance Control Act**

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.  
TSCA - 5(a): No substances are subject to a Significant New Use Rule  
TSCA 12(b): No substances are subject to export notification requirements (40 CFR 707)

**US State Regulations**

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Canadian Regulations**

CEPA DSL: This product contains one or several components listed in the Canadian DSL.

**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.

Date of last issue: 12/20/2018  
Revision date: 2/18/2019

**Freeman 1066 Part B (Black Hardener)**

**Section 1 Identification**

**Product identifiers**

Product name: Freeman 1066 Part B (Black Hardener)

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

Identified uses: Component of a polyurethane system

**Details of the supplier of the safety data sheet**

Freeman Manufacturing and Supply Company  
 1101 Moore Road, Avon, OH 44011  
 Telephone (440) 934-1902

HMIS	
H	3
F	1
R	0
PPE	
Sec. 8	

**24 Hour emergency telephone number: CHEMTREC (800) 424-9300**

**Section 2 Hazards Identification**

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

- Acute Toxicity, Oral, Category 4
- Acute Toxicity, Inhalation, Category 4
- Skin Sensitization, Category 1
- Germ Cell Mutagenicity, Category 2
- Carcinogenicity, Category 2
- Specific Target Organ Toxicity, Single Exposure, Oral, Category 2 (Liver)
- Specific Target Organ Toxicity, Repeated Exposure, Oral, Category 1 (Liver)
- Specific Target Organ Toxicity, Repeated Exposure, Oral, Category 2 (Kidney)
- Acute Aquatic Hazard, Category 1
- Chronic Aquatic Hazard, Category 1

**GHS Label elements, including precautionary statements**



Signal word

Danger

**Hazard Statements**

- Harmful if swallowed or inhaled.
- May cause an allergic skin reaction.
- Suspected of causing genetic defects.
- Suspected of causing cancer.
- May damage fertility or the unborn child.
- May cause damage to organs (Liver) if swallowed.
- Causes damage to organs (Liver) through prolonged or repeated exposure if swallowed.
- May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
- Very toxic to aquatic life with long lasting effects.

**Section 2 Hazards Identification** continued

**Precautionary Statements**

**Prevention**

- Use personal protective equipment as required.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid release to the environment.
- Do not breathe vapor. Do not eat, drink or smoke when using this product.
- Use only outdoors or in well-ventilated area.
- Wash hands thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.

**Response**

- Get medical attention if you feel unwell.
- IF exposed or if you feel unwell: Call a POISON CENTER or physician.
- IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- If skin irritation or rash occurs: Get medical attention.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Wash contaminated clothing before reuse.
- Collect spillage.

**Storage**

Store in a well-ventilated, cool place. Keep container tightly closed when not in use.

**Disposal**

Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

None known

**Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
4,4'-methylenebis(2-ethylaniline)	19900-65-3	50 - 70
Formaldehyde, polymer with 2-ethylbenzenamine	69178-41-2	5 - 10
2-ethylaniline	578-54-1	1 - 5

**Section 4 First Aid Measures**

**Description of first aid measures**

**If inhaled**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**In case of skin contact**

Wash with plenty of soap and water. Remove contaminated clothing and shoes. If skin irritation persists, call a physician.

**In case of eye contact**

Flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, call a physician.

**Freeman 1066 Part B (Black Hardener)**

**Section 4 First Aid Measures continued**

**If swallowed**

Induce vomiting immediately and call a physician. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. Take victim immediately to the hospital.

**Notes to physician:** Treat symptomatically.

**Section 5 Fire-Fighting Measures**

**Extinguishing media**

Suitable extinguishing media: Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide. Unsuitable extinguishing media: High volume water jet.

**Special hazards arising from the substance or mixture**

Do not allow run-off from firefighting to enter drains or water courses.

**Hazardous thermal decomposition products**

Carbon dioxide, carbon monoxide, nitrogen oxides

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

Collect contaminated fire extinguishing water separately. Do not discharge into drains. Dispose of in accordance with local regulations.

**Section 6 Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapors, mist or gas.  
 For personal protection see section 8.

**Environmental precautions**

Do not let product enter drains. If product contaminates rivers and lakes or drains inform respective authorities.

**Methods and materials for containment and cleaning up**

Dike and contain spill. Soak up with inert absorbent material (e.g. sand, silica gel, sawdust).  
 Keep in suitable, closed containers for disposal.

**Section 7 Handling and Storage**

**Precautions for safe handling**

Do not breathe fumes or vapor. Do not allow material to contact skin or eyes. See section 8 for personal protective equipment. Provide appropriate exhaust ventilation.

**Conditions for safe storage, including any incompatibilities**

Store at ambient temperatures in closed containers. No known incompatible materials.

**Section 8 Exposure Controls/Personal Protection**

**Components with workplace control parameters**

Component	Value Type	Control Parameters	Source
2-ethylaniline	TWA	5 ppm	OSHA

**Freeman 1066 Part B (Black Hardener)**

**Section 8 Exposure Controls/Personal Protection continued**

**Exposure controls**

**Appropriate engineering controls**

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Personal protective equipment**

**Eye/face protection**

Use safety goggles.

**Skin protection**

**Hand protection**

Use impervious gloves. Discuss suitability with manufacturer. Replace contaminated gloves.

**Body protection**

Prevent skin contact when handling material. Wear impervious clothing.

**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.

**Safety stations**

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

**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**

<b>Appearance</b>	Black liquid
<b>Odor</b>	No data available
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>VOC</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point</b>	No data available
<b>Flash point (closed cup)</b>	>93°C (>200°F)
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/lower flammability</b>	No data available
<b>Vapor pressure</b>	No data available
<b>Vapor density</b>	No data available
<b>Relative density (g/cc)</b>	1.01
<b>Water solubility</b>	Slightly soluble
<b>Coefficient: n-octanol/ water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available

**Freeman 1066 Part B (Black Hardener)**

**Section 10 Stability and Reactivity**

**Reactivity**

Stable under recommended storage conditions.

**Chemical stability**

No decomposition if stored and applied as directed.

**Possibility of hazardous reactions**

None known.

**Conditions to avoid**

None known.

**Incompatible materials**

None known.

**Hazardous decomposition products**

Thermal oxidative decomposition can produce carbon oxides, and nitrogen oxides.

**Section 11 Toxicological Information**

**Information on toxicological effects**

<b>Acute oral toxicity</b>	702.11 mg/kg (calculated)
<b>Acute inhalation toxicity</b>	1.45 mg/l, 4 h (calculated)
<b>Acute dermal toxicity</b>	3,248 mg/kg (calculated)
<b>Skin corrosion/irritation</b>	No data available
<b>Serious eye damage/eye irritation</b>	No data available
<b>Respiratory or skin sensitization</b>	May cause skin sensitization
<b>Germ cell mutagenicity</b>	No data available
<b>Carcinogenicity</b>	
<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>Reproductive toxicity</b>	No data available
<b>STOT - single exposure</b>	(Specific Target Organ Toxicity) Liver
<b>STOT - repeated exposure</b>	(Specific Target Organ Toxicity) Liver and Kidneys
<b>Aspiration toxicity</b>	No data available

**Section 12 Ecological Information**

<b>Toxicity</b>	4,4'-methylenebis(2-ethylaniline): LC50 (Oryzias latipes):20.6 mg/l, Exposure time: 96 h
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Results of PBT &amp; vPvB assessment</b>	No data available

**Freeman 1066 Part B (Black Hardener)**

**Section 13 Disposal Considerations**

Do not allow product to enter drains, water courses or soil. Do not re-use empty containers. Contact a licensed waste management company. Dispose of in accordance with applicable regional, national and local laws and regulations.

**Section 14 Transport Information**

**DOT:** **Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline)  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** Class 9  
**ERG Code:** 171  
**Marine pollutant:** yes

**IATA:** **Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline)  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** Miscellaneous  
**Packing instruction:** 964

**IMDG:** **Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline)  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** 9  
**EmS Code:** F-A, S-F  
**Marine pollutant:** yes

**Note:** Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code. Not applicable for product as supplied.

**Section 15 Regulatory Information**

**US Federal Regulations**

SARA 311/312 Codes: Acute toxicity, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, Specific target organ toxicity (single or repeated exposure)

SARA 313 Toxic Chemical: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

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

Clean Air Act Section 112: This product does not contain any hazardous air pollutants (HAP)

**US State Regulations**

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**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.

Date of last issue: 8/20/2018

Revision date: 2/18/2019

**Freeman 1066 Part B (Red Hardener)**

**Section 1 Identification**

**Product identifiers**

Product name: Freeman 1066 Part B (Red Hardener)

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

Identified uses: Component of a polyurethane system

**Details of the supplier of the safety data sheet**

Freeman Manufacturing and Supply Company  
 1101 Moore Road, Avon, OH 44011  
 Telephone (440) 934-1902

HMIS	
H	3
F	1
R	0
PPE	
Sec. 8	

**24 Hour emergency telephone number: CHEMTREC (800) 424-9300**

**Section 2 Hazards Identification**

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

- Acute Toxicity, Oral, Category 4
- Acute Toxicity, Inhalation, Category 4
- Skin Sensitization, Category 1
- Germ Cell Mutagenicity, Category 2
- Carcinogenicity, Category 2
- Specific Target Organ Toxicity, Single Exposure (Oral), Category 2 - Liver
- Specific Target Organ Toxicity, Repeated Exposure (Oral), Category 1 - Liver
- Specific Target Organ Toxicity, Repeated Exposure (Oral), Category 2 - Kidney
- Acute Aquatic Hazard, Category 1
- Chronic Aquatic Hazard, Category 1

**GHS Label elements, including precautionary statements**



Signal word                      Danger

**Hazard Statements**

- Harmful if swallowed.
- May cause an allergic skin reaction.
- Suspected of causing genetic defects.
- Suspected of causing cancer.
- May cause damage to organs (Liver) if swallowed.
- Causes damage to organs (Liver) through prolonged or repeated exposure if swallowed.
- May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
- Very toxic to aquatic life with long lasting effects.

**Section 2 Hazards Identification** continued

**Precautionary Statements**

**Prevention**

- Use personal protective equipment as required.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid release to the environment.
- Do not breathe vapor. Do not eat, drink or smoke when using this product.
- Use only outdoors or in well-ventilated area.
- Wash hands thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.

**Response**

- Get medical attention if you feel unwell.
- IF exposed or if you feel unwell: Call a POISON CENTER or physician.
- IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- If skin irritation or rash occurs: Get medical attention.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Wash contaminated clothing before reuse.
- Collect spillage.

**Storage**

Store in a well-ventilated, cool place. Keep container tightly closed when not in use.

**Disposal**

Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

None known

**Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
Diethyl methylene dianiline	19900-65-3	50 - 70
Formaldehyde, polymer with 2-ethylbenzidine	68178-41-2	5 - 10
2-ethylaniline	578-54-1	1 - 5

**Section 4 First Aid Measures**

**Description of first aid measures**

**If inhaled**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention.

**In case of skin contact**

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention.

**In case of eye contact**

Flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Section 4 First Aid Measures** continued

**If swallowed**

Wash out mouth with water. If the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.

**Most important symptoms and effects, both acute and delayed**

**Eye contact:** None known.

**Inhalation:** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact:** May cause an allergic skin reaction.

**Ingestion:** Harmful if swallowed.

**Notes to physician:** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically.

**Section 5 Fire-Fighting Measures**

**Extinguishing media**

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

**Special hazards arising from the substance or mixture**

In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Do not allow run-off from firefighting to enter drains or water courses.

**Hazardous thermal decomposition products**

Carbon dioxide, carbon monoxide, nitrogen oxides

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

Collect contaminated fire extinguishing water. Do not discharge into drains. Dispose of in accordance with local regulations.

**Section 6 Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapors, mist or gas.

For personal protection see section 8.

**Environmental precautions**

Do not let product enter drains. If product contaminates rivers and lakes or drains inform respective authorities.

**Methods and materials for containment and cleaning up**

Dike and contain spill. Soak up with inert absorbent material (e.g. sand, silica gel, sawdust).

Keep in suitable, closed containers for disposal.

Freeman 1066 Part B (Red Hardener)

**Section 7 Handling and Storage**

**Precautions for safe handling**

Do not breathe fumes or vapor. Do not allow material to contact skin. See section 8 for personal protective equipment. Provide appropriate exhaust ventilation.

**Conditions for safe storage, including any incompatibilities**

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. No known incompatible materials.

**Section 8 Exposure Controls/Personal Protection**

**Components with workplace control parameters**

Component	Value Type	Control Parameters	Source
2-ethylaniline	TWA	5 ppm	OSHA

**Exposure controls**

**Appropriate engineering controls**

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Personal protective equipment**

**Eye/face protection**

Use safety goggles equipped with side shields.

**Skin protection**

**Hand protection**

Use impervious gloves. Discuss suitability with manufacturer of gloves. Contaminated gloves should be replaced.

**Body protection**

Prevent skin contact when handling material. Wear impervious clothing.

**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.

**Safety stations**

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

**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**

<b>Appearance</b>	Red liquid
<b>Odor</b>	No data available
<b>Odor Threshold</b>	No data available

**Section 9 Physical and Chemical Properties** continued

<b>pH</b>	No data available
<b>VOC</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point</b>	No data available
<b>Flash point (closed cup)</b>	>93°C (>200°F)
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/lower flammability</b>	No data available
<b>Vapor pressure</b>	No data available
<b>Vapor density</b>	No data available
<b>Relative density (g/cc)</b>	1.01
<b>Water solubility</b>	Slightly soluble
<b>Coefficient: n-octanol/ water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available

**Section 10 Stability and Reactivity**

**Reactivity**

Stable under recommended storage conditions.

**Chemical stability**

No decomposition if stored and applied as directed.

**Possibility of hazardous reactions**

None known.

**Conditions to avoid**

None known.

**Incompatible materials**

None known.

**Hazardous decomposition products**

Thermal oxidative decomposition can produce carbon oxides, and nitrogen oxides.

**Section 11 Toxicological Information**

**Information on toxicological effects**

<b>Acute oral toxicity</b>	LC50, Rat 444 mg/kg (diethyl methylene dianiline)
<b>Acute inhalation toxicity</b>	LC50, Rat >0.85 mg/l (diethyl methylene dianiline)
<b>Acute dermal toxicity</b>	LC50, Rat 2080 mg/kg (diethyl methylene dianiline)
<b>Skin corrosion/irritation</b>	Non-irritating to the skin.
<b>Serious eye damage/eye irritation</b>	Non-irritating to the eyes.
<b>Respiratory or skin sensitization</b>	Sensitizing to skin
<b>Germ cell mutagenicity</b>	Genotoxic (Diethyl methylene dianiline)
<b>Carcinogenicity</b>	
<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

**Section 11 Toxicological Information** continued

<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<b>Reproductive toxicity</b>	No data available
<b>STOT - single exposure</b>	(Specific Target Organ Toxicity) Liver
<b>STOT - repeated exposure</b>	(Specific Target Organ Toxicity) Liver and Kidneys
<b>Aspiration toxicity</b>	No data available

**Section 12 Ecological Information**

<b>Toxicity</b>	4,4'-methylenebis(2-ethylaniline): LC50 (Oryzias latipes): 20.6 mg/l, Exposure time: 96 h
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Results of PBT &amp; vPvB assessment</b>	No data available

**Section 13 Disposal Considerations**

Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Dispose of in accordance with applicable regional, national and local laws and regulations.

**Section 14 Transport Information**

**DOT: Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline) Marine pollutant  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** Class 9, Marine Pollutant  
**Remarks:** Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg.

**IATA: Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline)  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** Class 9, Marine Pollutant  
**Packing instruction:** 964

**Section 14 Transport Information** continued

**IMDG: Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Diethyl Methylene Dianiline) Marine pollutant  
**Hazard Class:** 9  
**ID No.:** UN 3082  
**Packing Group:** III  
**Label:** Class 9, Marine Pollutant  
**EmS:** F-A, S-F

**Note:** Under 49 CFR 171.4 (c) NONBULK shipments of marine pollutants are not regulated for transport by motor vehicles, rail cars or aircraft. NONBULK shipments of marine pollutants are regulated when transported by vessel (ship).

**Section 15 Regulatory Information**

**US Federal Regulations**

SARA 311/312 Codes: Acute toxicity, Respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, specific target organ toxicity (single or repeated)  
SARA 313 Toxic Chemical (40 CFR 372.65): No ingredients listed  
TSCA Inventory Status: All ingredients are listed or exempted

**US State Regulations**

California Proposition 65: ⚠️ **WARNING:** This product can expose you to chemicals including Diisodecyl phthalate, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Canadian Regulations**

CEPA DSL : At least one component is not listed.  
WHMIS Classes : Class D-2A: Material causing other toxic effects (Very toxic).  
Class D-2B: Material causing other toxic effects (Toxic).

**Section 16 Other Information**

**Disclaimer**

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