

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

Appearance	Clear to slightly hazy liquid
Odor	Slight
Odor threshold	No data available
pH	No data available
Boiling point	>200°C (>392°F)
Flash point (Pensky-Martens)	>150°C (>302°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)	1.06
Water Solubility	Reacts violently with water
Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	>200°C (>392°F)
Viscosity	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

Appearance	Black liquid
Odor	No data available
Odor Threshold	No data available
pH	No data available
VOC	No data available
Freezing point	No data available
Boiling point	No data available
Flash point (closed cup)	>93°C (>200°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)	1.01
Water solubility	Slightly soluble
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	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

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

Section 12 Ecological Information

Toxicity	4,4'-methylenebis(2-ethylaniline): LC50 (Oryzias latipes):20.6 mg/l, Exposure time: 96 h
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

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

Appearance	Red liquid
Odor	No data available
Odor Threshold	No data available

Section 9 Physical and Chemical Properties continued

pH	No data available
VOC	No data available
Freezing point	No data available
Boiling point	No data available
Flash point (closed cup)	>93°C (>200°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)	1.01
Water solubility	Slightly soluble
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	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

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

Section 11 Toxicological Information continued

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
STOT - single exposure	(Specific Target Organ Toxicity) Liver
STOT - repeated exposure	(Specific Target Organ Toxicity) Liver and Kidneys
Aspiration toxicity	No data available

Section 12 Ecological Information

Toxicity	4,4'-methylenebis(2-ethylaniline): LC50 (Oryzias latipes): 20.6 mg/l, Exposure time: 96 h
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. 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

Freeman 1066 Part B (Red Hardener)

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.

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

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