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Master[®] Dyna-Cast Part A

Section 1 Identification

Product identifiers

Product name: Master® Dyna-Cast Part A

Relevant identified uses of the substance or mixture and uses advised against Identified uses: Fast-Cast Urethane Isocyanate Resin

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

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 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 3

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. **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.



Section 2 Hazards Identification continued

Avoid breathing mist, vapors or spray.					
Do not eat, drink or smoke when using this product.					
Wash skin and face thoroughly after handlir	· · · · · · · · · · · · · · · · · · ·				
Use only outdoors or in a well-ventilated are	0				
Contaminated work clothing must not be all		vrknlace			
In case of inadequate ventilation wear respi		лкрасе.			
	ratory protection				
Response					
Get medical attention if you feel unwell.					
If on skin: Wash with plenty of soap and wa					
If skin irritation or rash occurs: Get medical	attention.				
Wash contaminated clothing before reuse.			-		
If in eyes: Rinse continuously with water fo	r at least 15 minute	es. Remove contact lenses,	if		
present and easy to do. Continue rinsing.					
If eye irritation persists: Get medical attenti					
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.					
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.					
Hazards not otherwise classified (HNOC) or not	Hazards not otherwise classified (HNOC) or not covered by GHS				
None known					
Section 3 Composition/Information on Ingredients					
Ingredient Name	CAS Number	Concentration (%)	1		
Barium sulfate	7727-43-7	20-40	-		
Polymeric Diphenylmethane Diisocyanate	9016-87-9	10-25			
4,4'-Diphenylmethane Diisocyanate	101-68-8	10-25	-		
Distillates (petroleum), hydrotreated light	64742-47-8	0.5-5.0			
Stoddard Solvent					
1-Methyl-2-pyrrolidone					
1-Methoxy-2-propanol acetate	108-65-6	< 0.50			
Nonane 111-84-2 <0.25			1		
Ethylbenzene 100-41-4 <0.01					

Section 4 First Aid Measures

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.



Section 4 First Aid Measures continued

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.				
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.				
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				
Extinguishing modia				
Extinguishing media				
Suitable extinguishing media				
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.				
Special hazards arising from the substance or mixture Nature of decomposition products not known.				
Advice for firefighters				
Wear self-contained breathing apparatus for firefighting if necessary.				
Further information				
No data available.				



Master[®] Dyna-Cast Part A

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.

Methods and materials for containment and cleaning up

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

Section 7 Handling and Storage

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.

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

Components with workplace control parameters

Ingredient	OSHA		AC	CGIH
	PEL	STEL	TWA	STEL
Barium sulfate	15 mg/m ³ (total dust)	Not established	10 mg/m ³ (total dust)	Not established
Polymeric Diphenylmethane Diisocyanate	Not established	Not established	Not established	Not established
4,4'-Diphenylmethane Diisocyanate	0.02 ppm	Not established	0.005 ppm	Not established
1-Methyl -2- pyrrolidone	Not established	Not established	10 ppm	Not established
1-Methoxy-2- propanol acetate	Not established	Not established	50 ppm	Not established
Distillates (petroleum), hydrotreated light	500 ppm	Not established	200 mg/m ³ (TLV)	Not established
Stoddard Solvent	500 ppm	Not established	100 ppm	Not established
Nonane	Not established	Not established	200 ppm	Not established
Ethylbenzene	Not established	125 ppm	20 ppm	125 ppm

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.



Section 8 Exposure Controls/Personal Protection continued

Personal protective equipment

Eye/face protection

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

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.

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 Ph	nysical and Chemical Properties
Appearance	Opaque yellow liquid
Odor	Mild
Odor Threshold	No data available
рН	No data available
Melting Point	No data available
VOC Content	No data available
Initial boiling point & boiling rai	nge No data available
Flash Point(COC)	54°C (130°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	1,500 cP at room temperature
Explosive Properties	None
Oxidizing Properties	None
% Volatile	3-8 %





Section 10 Stability and Reactivity

Reactivity

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

Chemical stability

Stable under recommended storage conditions.

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)

Conditions to avoid

Heat and open flames.

Incompatible materials

Water, alcohols, amines, bases, and acids.

Hazardous decomposition products

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

Section 11 Toxicological Information

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 irritatio	n Moderate irritant			
Respiratory or skin sensitization	Skin sensitizer and respiratory sensitizer			
Germ cell mutagenicity	No data available			
Carcinogenicity				
	is product present at levels greater than or equal to 0.1% is			
	nogen 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.			
identified as a know	n or anticipated carcinogen.			
	is 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				
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

Disposal

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

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101)

Shipping Name: Resin Solution Shipping Symbols: Hazard Class: 3 ID No.: UN 1866 Packing Group: III Label: Flammable Liquid

Section 15 Regulatory Information

US Federal Regulations

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33) 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 10-25% 4, 4' Diphenylmethane Diisocyanate CAS #101-68-8 10-25%

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

US State Regulations

California Prop 65: **A WARNING**: This product can expose you to chemicals including Ethylbenzene and N-Methylpyrrolidone, which are known to the State of California to cause cancer, or birth defects or other reproductive harm. For more information go to <u>www.P65Warnings.ca.gov</u>.

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.



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REEMAN Manufacturing & Supply Company	Master [®] Dyna-Cast Part	
Section 1 Identification		
Product identifiers		
Product name: Master [®] Dyna-Cast Par	't B	
Relevant identified uses of the substance o	r mixture and uses advised against	
Identified uses: Fast-Cast Urethane Po		
Details of the supplier of the safety data sh	5	
Freeman Manufacturing and Supply C		
1101 Moore Road, Avon, OH 44011	- F - J	
Phone (440) 934-1902		
FAX (440) 934-7200		
24 Hour emergency telephone number: CH	IEMTREC (800) 424-9300	
Section 2	Hazards Identification	
GHS Classification in accordance with 29 C	FR 1910.1200 (OSHA HCS)	
Eye irritation: Category 2B		
Flammable Liquid Category 4		

GHS Label elements, including precautionary statements



Signal word

Warning

Hazard statements

Combustible liquid. Causes eye irritation.

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.

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.

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Master[®] Dyna-Cast Part B

Section 2 Hazards Identification continued

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

None known

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Barium sulfate	7727-43-7	20-40
Pentaerythritol propoxylate; 2,2- bis(hydroxymethyl)propane-1,3-diol - 3-{3-(3- hydroxypropoxy)-2,2-bis[(3- hydroxypropoxy)methyl]propoxy}propan-1-ol (1:1)	9051-49-4	10-25
Polyether polyol	25214-63-5	0.5-5.0
Distillates (petroleum), hydrotreated light	64742-47-8	0.5-5.0
Stoddard Solvent	8052-41-3	0.5-5.0
Nonane	222-84-2	< 0.25
Ethylbenzene	100-41-4	< 0.01

Section 4 First Aid Measures

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.

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.

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.





Master[®] Dyna-Cast Part B

Section 5 Fire-Fighting Measures				
 Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture Nature of decomposition products not known. Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Further information No data available. 				
	Section 6 Accie	dental Release Mea	asures	
Personal precautions, pro Avoid breathing vap For personal protect Environmental precaution Do not let product e Methods and materials for Sweep up and shove	oors, or mist. tion see section 8. ns nter drains. r containment and	cleaning up		
	Section 7 H	Handling and Stora	ge	
Precautions for safe hand Use normal precauti not allow material to Provide appropriate Conditions for safe storag Store at ambient ten point. No chemical i	ions when handling o contact skin. e exhaust ventilation e, including any in nperatures in closed	ı. compatibilities		
Section 8 Exposure Controls/Personal Protection				
Components with workplace control parameters				
Ingredient	05	НА		CGIH
	PEL	STEL	TWA	STEL
Barium sulfate	15 mg/m ³ (total dust)	Not established	10 mg/m ³ (total dust)	Not established
Polyether polyols	Not established	Not established	20 ppm	Not established
Distillates (petroleum), hydrotreated light	500 ppm	Not established	200 mg/m ³ (TLV)	Not established
Stoddard Solvent	500 ppm	Not established	100 ppm	Not established
Nonane	Not established	Not established	200 ppm	Not established
Ethylbenzene	Not established	125 ppm	20 ppm	125 ppm

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.



Master[®] Dyna-Cast Part B

Section 8 Exposure Controls/Personal Protection continued

Personal protective equipment Eye/face protection Use safety glasses equipped with side shields. 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. **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 Opaque blue liquid Odor Mild **Odor Threshold** No data available рH No data available No data available **Melting Point VOC Content** No data available **Initial boiling point & boiling range** No data available 77°C (170°F) Flash Point (COC) **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 Viscositv 2,000 cP at room temperature **Explosive Properties** None **Oxidizing Properties** None % Volatile 5-10%



Master[®] Dyna-Cast Part B

Section 10 Stability and Reactivity

Reactivity

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

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None

Conditions to avoid

Heat and open flames.

Incompatible materials

Water, alcohols, amines, bases, and acids.

Hazardous decomposition products

Thermal oxidative decomposition can produce CO, and CO₂.

Section 11 Toxicological Information			
Information on toxic	cological effects		
Information on toxicological effects Acute Oral toxicity		Low toxicity	
Acute Inhalat		Low toxicity	
Acute Derma		Low toxicity	
Skin corrosio	n/irritation	Mild skin irritant	
	amage/eye irritation	Mild eye irritant	
Respiratory	or skin sensitization	No data available	
Germ cell mu	tagenicity	No data available	
Carcinogenic	ity		
IARC		product present at levels greater than or equal to 0.1% is gen or potential carcinogen.	
ACGIH	No component of this	product present at levels greater than or equal to 0.1% is	
	-	gen or potential carcinogen.	
NTP		product present at levels greater than or equal to 0.1% is	
OSHA	identified as a known or anticipated carcinogen. 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		Not expected to be a hazard	
	t organ toxicity		
- single exposure		None expected	
	t organ toxicity		
- repeated exposure		None expected	
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	



Master[®] Dyna-Cast Part B

Section 13 Disposal Considerations

Disposal

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

Section 14 Transport Information

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

US Federal Regulations

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

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.

US State Regulations

California Prop 65: **MWARNING**: This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to <u>www.P65Warnings.ca.gov</u>.

Section 16 Other Information

Disclaimer

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