

1. Identification

Product Identifier: **Tough-Cast 65D Side "A"**
 Use: Component for Polyurethane Mold Making/Casting. For Industrial/Professional use only.
 Manufacturer: Specialty Resin & Chemical
 58100 Park Place, Dowagiac, MI 49047, USA
 Phone Number: +1 269-462-9256
 Emergency Phone: CHEMTREC 800-424-9300 or +1 703-527-3887

2. Hazards Identification

GHS Classification:

Acute Toxicity (Inhalation) – Category 4
 Skin Irritation – Category 2
 Eye Irritation – Category 2B
 Respiratory Sensitization – Category 1
 Skin Sensitization – Category 1B
 Reproductive Toxin – Category 2
 Specific Target Organ Toxicity – Single Exposure Category 3
 Specific Target Organ Toxicity – Repeated Exposure Category 2

Label Elements: Danger



Hazard Phrases

H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H320 Causes eye irritation.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H361 Suspected of damaging fertility or the unborn child.
 H373 May cause damage to respiratory system through prolonged or repeated exposure.

Precautionary Phrases

P203 Obtain, read, and follow all safety instructions before use.
 P260 Do not breathe fumes, vapors, mists, or sprays.
 P264 Wash thoroughly with soap and water after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated clothing should not be allowed out of the workplace.
 P280 Wear protective gloves, protective clothing, eye protection, and face protection.
 P284 In case of inadequate ventilation, wear respiratory protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P304+P340 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P318 IF exposed or concerned, get medical advice.
 P319 Get medical help if you feel unwell.
 P333+P317 If skin irritation or rash occurs: Get medical help.
 P337+P317 If eye irritation persists: Get medical help.
 P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.
 P362+P364 Take off contaminated clothing and wash before reuse.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

P501 Dispose of contents and container in accordance with local, regional, and national regulations.

Supplemental Information: Individuals sensitized to isocyanates should discontinue use. Long-term overexposure to isocyanates may cause lung damage. This is one part of a two-part system. Read and understand the hazard information on Side "B" before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	%
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8	50-60
2,2,4-trimethyl-1,3-pentanediol diisobutylate	6846-50-0	0-10
Exact concentrations are withheld as trade secret. Other ingredients are not listed because they are either not hazardous or are below concentration/cut-off thresholds.		

4. First-Aid Measures

Eye Contact: Rinse thoroughly with water for at least 15 minutes, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

Skin Contact: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists. Launder clothing before reuse. Discard items that cannot be decontaminated.

Inhalation: Remove person to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell.

Most Important Symptoms/Effects: Causes skin and eye irritation. Vapors or mists may cause respiratory irritation. May cause allergic skin and/or respiratory reaction in sensitized persons. Symptoms include skin rash, wheezing, shortness of breath and other asthma symptoms.

Indication of Immediate Medical Attention/Special Treatment:

Immediate medical attention is required for asthmatic symptoms or serious inhalation exposures. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Persons sensitized to Diisocyanates should consult a physician before working with respiratory irritants or sensitizers.

5. Fire-Fighting Measures

Extinguishing Media: Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.

Specific Hazards: Not classified as flammable or combustible. Product will burn under fire conditions.

Special Protective Equipment & Precautions for Fire-Fighters: Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency

Procedures: Remove all ignition sources. Clear non-emergency personnel from the area. Ventilate area. Wear appropriate protective clothing to prevent eye and skin contact and respiratory protection.

Methods and Materials for Containment and Cleanup: Cover with an inert absorbent material and collect into an appropriate container for disposal. Do not seal the container since CO₂ is generated on contact with moisture and dangerous pressure buildup can occur. Decontaminate floor area with a mixture of water plus isopropyl alcohol (10-20%), household ammonia (10%), and detergent (2%).

7. Handling and Storage

Safe Handling: Do not breathe fumes, vapors, mists, or sprays. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly with soap and water after handling. Do not eat, drink or smoke in the work area. Keep container closed when not in use.

Safe Storage: Store indoors at temperatures between 55°F and 95°F (13°C and 35°C). Store in original, unopened containers. Protect from atmospheric moisture and water since MDI reacts with water to form CO₂ leading to potentially dangerous pressure build up in sealed containers.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits: For MDI:

OSHA PEL 0.02 ppm (C)

ACGIH TLV 0.005 ppm TWA; 0.02 ppm STEL

Ventilation: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Respiratory Protection: If needed (i.e., ventilation is inadequate), use a NIOSH-approved air-purifying, tight-fitting, half-face respirator with organic vapor cartridges. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator. Use respirators in accordance with OSHA's Respiratory Protection Standard (29 CFR 1910.134).

Skin Protection: Wear impervious gloves, such as butyl rubber or nitrile rubber.

Eye Protection: Wear chemical safety goggles/glasses.

Other Protective Measures: Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash and washing facility should be available in the work area. Follow good Industrial Hygiene practices.

9. Physical and Chemical Properties

Appearance: Liquid, clear yellow

Odor: Mild

Odor Threshold: Not determined

pH: Not applicable

Melting Point: No data available

Boiling Point: No data available

Flash Point: No data available

Evap. Rate: No data available

Flammable Limits: No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available

Solubility: Insoluble in water

Partition Coefficient: n-octanol/Water: Reacts with water

Auto-Ignition Temp: No data available

Decomposition Temp: No data available

Viscosity: No data available

10. Stability and Reactivity

Reactivity: Diisocyanates react with many materials and the rate of reaction increases with temperature. Reaction with water generates carbon dioxide and heat.

Chemical Stability: Stable under recommended conditions.

Possibility of Hazardous Reactions: Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by strong bases or water. Reaction with water generates carbon dioxide, and results in heat and pressure buildup in closed systems.

Conditions to Avoid: Avoid moisture and temperatures below 55°F (13°C) and above 95°F (35°C) to protect product integrity.

Incompatible Materials: Avoid contact with water, acids, bases, alcohols, strong oxidizers, and some metals (e.g., aluminum, zinc, brass, tin, copper).

Hazardous Decomposition Products: Possibly isocyanate vapor, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide.

11. Toxicological Information

Eye Contact: Causes eye irritation.

Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Inhalation: Harmful if inhaled. May cause respiratory irritation, drowsiness, or dizziness.

Ingestion: None known.

Chronic Health Effects: Repeated or prolonged exposure to isocyanates may cause an allergic sensitization of the respiratory tract causing an asthma-like response upon re-exposure. Repeated overexposure to isocyanates has been associated with decreased lung function. Repeated or prolonged dermal contact with this product may cause allergic skin sensitization in some individuals.

Acute Toxicity Values: For MDI:

Oral LD₅₀ (rat): >2,000 mg/kg

Dermal LD₅₀ (rabbit): >9,400 mg/kg

Inhalation LC₅₀ (rat): 2.0 mg/L/4hr (aerosol)

Respiratory Sensitization: Components are classified as respiratory sensitizers.

Skin Sensitization: Components are classified as skin sensitizers.

Germ Cell Mutagenicity: Components are not classified as mutagens.

Carcinogenicity: Components are not classified as carcinogens.

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity: May damage the respiratory system through prolonged or repeated exposure.

12. Ecological Information

Ecotoxicity: No data available. Avoid release to the environment.

Persistence and Degradability: Not readily biodegradable.

Bioaccumulative Potential: Bioaccumulation is not expected.

Mobility in Soil: No data available.

13. Disposal Considerations

Dispose according to local, state and federal regulations. Upon exposure to moisture, product forms an inert, non-hazardous solid. In the U.S., this product is not a RCRA hazardous waste (per 40 CFR 261).

14. Transport Information

Not regulated for transport in any mode.

EMERGENCY SHIPPING: CHEMTREC, 800-424-9300 or +1-703-527-3887

15. Regulatory Information

U.S. FEDERAL REGULATIONS:

CERCLA Reportable Quantity: This product is not subject to these reporting requirements. Some States have more stringent requirements. Report spills in accordance with local and state regulations.

SARA TITLE III Section 311/312: Acute Health, Chronic Health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 reporting requirements: Disphenylmethane-4,4'-diisocyanate (MDI) 50-60%

EPA Toxic Substances Control Act (TSCA) Status: Components of this product are listed on the TSCA inventory.

STATE REGULATIONS:

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer and/or reproductive harm. www.P65Warnings.ca.gov

16. Other Information

Training Advice: Train personnel using this product in proper chemical handling, engineering controls and protective equipment.

Recommended Uses and Restrictions: This product is intended for industrial/professional use only.

SDS Revision Notes: Updated GHS Format: April 15, 2021.

Disclaimer: The information contained herein is considered accurate; however, Specialty Resin & Chemical makes no warranty regarding the accuracy of the information. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.

1. Identification

Product Identifier: **Tough-Cast 65D Side “B”**
 Use: Component for Polyurethane Mold Making/Casting. For Industrial/Professional use only.
 Manufacturer: Specialty Resin & Chemical
 58100 Park Place, Dowagiac, MI 49047, USA
 Phone Number: +1 269-462-9256
 Emergency Phone: CHEMTREC 800-424-9300 or +1 703-527-3887

2. Hazards Identification

GHS Classification:

Acute Toxicity (oral) – Category 4
 Skin Sensitization – Category 1
 Reproductive Toxin – Category 2
 Hazardous to the Aquatic Environment – Acute Hazard Category 1
 Hazardous to the Aquatic Environment – Chronic Hazard Category 1

Label Elements: Warning



Hazard Phrases

H302 Harmful if swallowed.
 H317 May cause an allergic skin reaction.
 H361 Suspected of damaging fertility or the unborn child.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Phrases

P203 Obtain, read, and follow all safety instructions before use.
 P261 Avoid breathing fumes, vapors, mists, or sprays.
 P270 Do not eat, drink, or smoke when using this product.
 P272 Contaminated clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves, protective clothing, eye protection and face protection.
 P301+P317 IF SWALLOWED: Get medical help.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P318 IF exposed or concerned, get medical advice.
 P330 Rinse mouth.
 P333+P317 If skin irritation or rash occurs: Get medical help.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents and container in accordance with local, regional, and national regulations.

Supplemental Information: This is one part of a two-part system. Read and understand the hazard information on Side “A” before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	%
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	10-20
4-methyl-2,5-bis(methylthio)-1,3-benzenediamine	102093-68-5	20-30

Exact concentrations are withheld as trade secret. Other ingredients are not listed because they are either not hazardous or are below concentration/cut-off thresholds.

4. First-Aid Measures

Eye Contact: Rinse thoroughly with water, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.
Skin Contact: Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists.
Inhalation: Remove person to fresh air. Get medical attention if you feel unwell.
Ingestion: Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell.
Most Important Symptoms/Effects: None known.
Indication of Immediate Medical Attention/Special Treatment: Not to be expected.

5. Fire-Fighting Measures

Extinguishing Media: Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.
Specific Hazards: Not classified as flammable or combustible. Product will burn under fire conditions.
Special Protective Equipment & Precautions for Fire-Fighters: Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Remove all ignition sources. Clear non-emergency personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact and avoid breathing vapors. Caution – spill area may be slippery.
Methods and Materials for Containment and Cleanup: Cover with an inert absorbent material and collect into an appropriate container for disposal. Avoid releases to the environment. Report spills and releases as required to appropriate authorities.

7. Handling and Storage

Safe Handling: Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep container closed when not in use.
Safe Storage: Store indoors at temperatures below 120°F (49°C). Store in original containers. Avoid getting moisture into containers. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits: None Established
Ventilation: Use with adequate general or local exhaust ventilation to minimize exposure levels.
Respiratory Protection: If needed, an approved respirator with organic vapor cartridges may be used. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator.
Skin Protection: Wear impervious gloves, such as butyl rubber or nitrile rubber.
Eye Protection: Wear chemical safety goggles.
Other Protective Measures: Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash facility and washing facility should be available in the work area. Follow applicable regulations and good Industrial Hygiene practice.

9. Physical and Chemical Properties

Appearance: Liquid, clear
Odor: Mild
Odor Threshold: No data available
pH: Not applicable
Melting Point: No data available
Boiling Point: No data available
Flash Point: No data available
Evaporation Rate: No data available
Upper/Lower Flammability Limits: No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility: Slightly soluble in water
Partition Coefficient: n-octanol/Water: No data available
Auto-Ignition Temp: No data available
Decomposition Temp: No data available
Viscosity: No data available

10. Stability and Reactivity

Reactivity: Not normally reactive.
Chemical Stability: Stable under recommended conditions.
Possibility of Hazardous Reactions: Reaction with strong oxidizers generates heat.
Conditions to Avoid: Avoid excessive heat.
Incompatible Materials: Avoid contact with strong oxidizers.
Hazardous Decomposition Products: Thermal decomposition will generate oxides of carbon and nitrogen, organic acids, and other toxic organic compounds.

11. Toxicological Information

Eye Contact: May cause mild eye irritation.
Skin Contact: May cause mild skin irritation.
Inhalation: Vapor and mists may cause mild respiratory irritation.
Ingestion: No data available.
Chronic Health Effects: May cause an allergic skin reaction.
Acute Toxicity Values: Not acutely hazardous.
Respiratory Sensitization: Components are not classified as respiratory sensitizers.
Skin Sensitization: Components are classified as skin sensitizers.
Germ Cell Mutagenicity: Components are not classified as mutagens.
Carcinogenicity: Components are not classified as carcinogens.
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity: No data available.

12. Ecological Information

Ecotoxicity: Very toxic to aquatic life with long lasting effects. Avoid release to the environment.
Persistence and Degradability: Not readily biodegradable.
Bioaccumulative Potential: Not expected to bioaccumulate.
Mobility in Soil: No data available.

13. Disposal Considerations

Dispose according to local, state and federal regulations.

14. Transport Information

US DOT: Non-bulk packages (<882lb or <119 gal) are not regulated.
Bulk packages: UN3082, Environmentally hazardous substance, liquid, n.o.s (6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine), 9, III.

IATA/IMDG: UN3082, Environmentally hazardous substance, liquid, n.o.s (6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine), 9, III, MARINE POLLUTANT.
Excepted from IATA and IMDG regulations if shipped in quantities of 5L (1.32gal) or less. (See IATA SP A197 and IMDG 2.10.2.7).
EMERGENCY SHIPPING: CHEMTREC, 800-424-9300 or +1-703-527-3887

15. Regulatory Information

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product is not subject to reporting under CERCLA. Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

SARA TITLE III

Section 311/312: Chronic Health

Section 313 Toxic Chemicals: This product contains no chemicals subject to SARA Title III Section 313 reporting requirements.

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on TSCA.

STATE REGULATIONS:

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer and/or reproductive harm. www.P65Warnings.ca.gov

16. Other Information

Training Advice: All personnel using/handling this product should be trained in proper chemical handling and the need for and use of engineering controls and protective equipment.

Recommended Uses and Restrictions: This product is intended for industrial/professional use only.

SDS Revision Notes: Updated GHS Format: April 15, 2021.

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