

1. Identification

Product Identifier: **FormRub 30 Liquid Rubber Part A**
FormRub 35 Liquid Rubber Part A
FormRub 50 Liquid Rubber Part A
FormRub 60 Liquid Rubber Part A
FormRub 65 Liquid Rubber Part A

Product Code(s): FORMRUB30A, FORMRUB35A, FORMRUB50A, FORMRUB60A, FORMRUB65A

Use: Component for Polyurethane Mold Rubber. For Industrial/Professional use only.

Manufacturer: Polytek Development Corp.
55 Hilton St., Easton, PA 18042 USA

Phone Number: +1 610-559-8620 (9 a.m. to 5 p.m. EST)

Emergency Phone: CHEMTREC 800-424-9300 or +1 703-527-3887

E-mail: sds@polytek.com

2. Hazards Identification

GHS Classification:

Acute Toxicity - Inhalation Category 4
 Skin Irritation Category 2
 Eye Irritation Category 2A
 Respiratory Sensitization Category 1
 Skin Sensitization Category 1
 Carcinogenicity Category 2
 Specific Target Organ Toxicity-Single Exposure Category 3 (H335)

Label Elements: Danger



Contains toluene diisocyanate and polyether polyol-TDI Prepolymer.

Hazard Phrases

H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.

Precautionary Phrases

P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing vapors or mists.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves, protective clothing, eye protection, and face protection.
 P285 In case of inadequate ventilation, wear respiratory protection.
 P362 Take off contaminated clothing and wash before reuse.
 P302+352 IF ON SKIN: Wash with plenty of soap and water.
 P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P304+340 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P308+313 IF exposed or concerned: Get medical attention.
 P403+233 Store in a well-ventilated place. Keep container tightly closed.
 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 part B before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	%
Toluene Diisocyanate	26471-62-5	≤2
Polyether polyol-TDI prepolymer	9057-91-4	50-80
Other ingredients are not classified as health, physical or environmental hazards, or are present below cut-off/concentration limits.		

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 prompt medical attention.

Skin Contact: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. 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.

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. Combustion products include oxides of carbon and nitrogen, isocyanates, hydrogen cyanide, dense smoke.

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 (20%), household ammonia (10%), and detergent (2%).

7. Handling and Storage

Safe Handling: Avoid breathing vapors or mists. 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 between 55 to 95°F (13 to 35°C). Store in original, unopened containers. Protect from atmospheric moisture and water, since TDI 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 TDI: 0.02 ppm (C) OSHA PEL; 0.005 ppm TWA ACGIH TLV; 0.02 ppm STEL ACGIH TLV.

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

Respiratory Protection: If needed, use an approved 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.

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: Clear pale yellow to amber liquid

Odor: Pungent, slightly sweet

Odor Threshold: Not determined

pH: Not applicable

Melting Point: No data available

Boiling Point: No data available

Flash Point: >350°F (177°C) estimated

Evap. Rate: No data available

Flamm. Limits: No data available

Vapor Pressure: ≤0.1 mm Hg @ 25°C

Vapor Density: No data available

Relative Density: 1.05 @ 25°C

Solubility: Insoluble in water

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

Auto-Ignition Temp: No data available

Decomposition Temp: No data available

Viscosity: 500-6,500 cP @ 25°C

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 serious eye irritation. May cause temporary corneal injury.

Skin Contact: Causes skin irritation. Repeated skin contact may cause an allergic skin reaction. Skin contact may elicit respiratory sensitization.

Inhalation: At room temperature, vapors are minimal due to low volatility. Vapors or aerosols (e.g., generated during heating or spraying)

may cause respiratory irritation and possibly pulmonary edema, or respiratory sensitization. For individuals sensitized to TDI, exposure may result in allergic respiratory reactions (e.g., coughing, wheezing, difficulty breathing).

Ingestion: Single oral dose toxicity is low. May cause adverse gastrointestinal effects.

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 or respiratory sensitization in some individuals. Products are not expected to be mutagens or reproductive toxins.

Acute Toxicity Values: For TDI: Oral rat LD50 >2,000 mg/kg; Skin rabbit LD50 >9,400 mg/kg; Inhalation rat LC50 0.48 mg/L/1 hr (aerosol) (equivalent 0.24 mg/L/4 hr). Calculated ATE_{mix} LC50 12.0 mg/L/4 hr.

Carcinogenicity: TDI is an IARC 2B carcinogen and classified as reasonably anticipated to be a human carcinogen by NTP. No other ingredients are classified as carcinogens by IARC, NTP, or OSHA.

Specific Target Organ Toxicity: Single Exposure: Classified as STOT-SE Category 3 for respiratory irritation. Repeat Exposure: Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to TDI aerosols.

12. Ecological Information

These products react with water to form insoluble polyureas. Movement in the aquatic and terrestrial environment is expected to be limited. They are not readily biodegradable and are not expected to bioaccumulate.

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 classified as hazardous for transport by US DOT, IMDG, IATA.

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

15. Regulatory Information

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: Product is not subject to reporting under CERCLA. 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:

Toluene Diisocyanate CAS 26471-62-5 ≤2%

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

STATE REGULATIONS:

California Proposition 65: WARNING: This product contains a chemical known to the state of California to cause cancer. (TDI)

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: Feb. 24, 2015, added FormRub35A. Supersedes Jan. 15, 2015.

Disclaimer: The information contained herein is considered accurate; however, Polytek® Development Corp. 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: **FormRub 60 Liquid Rubber Part B**
 Product Code(s): FORMRUB60B
 Use: Component for Polyurethane Mold Rubber.
 For Industrial/Professional use only.
 Manufacturer: Polytek Development Corp.
 55 Hilton St., Easton, PA 18042 USA
 Phone Number: +1 610-559-8620 (9 a.m. to 5 p.m. EST)
 Emergency Phone: CHEMTREC 800-424-9300 or
 +1 703-527-3887
 E-mail: sds@polytek.com

2. Hazards Identification

GHS Classification:

Skin Sensitizer Category 1
 Aquatic Toxicity - Chronic Category 3

Label Elements: Warning



Hazard Phrases

H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long-lasting effects.

Precautionary Phrases

P261 Avoid breathing vapors.
 P272 Contaminated work clothing should not be allowed out of the work area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice or attention.
 P363 Wash contaminated clothing before reuse.
 P501 Dispose of contents and container in accordance with local, regional and national regulations.

Supplemental Information: May cause skin irritation. This is one part of a two-part system. Read and understand the hazard information on Part A before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	GHS Classification	%
Dimethylthiotoluenediamine	106264-79-3	Acute Tox – Oral 4 Skin Sensitizer 1 Aquatic Tox Acute 1 Aquatic Tox Chronic 1	5-10
Exact concentrations are withheld as trade secret. Other ingredients are not classified as health, physical or environmental hazards, or are present below cut-off/concentration limits.			

4. First-Aid Measures

Eye Contact: Rinse thoroughly with water, holding the eyelids open to be sure the material is washed out. Remove contact lenses if safe and easy to do. Continue rinsing. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation persists.

Inhalation: Remove person to fresh air. Get medical attention if symptoms persist.

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

Most Important Symptoms/Effects: May cause an allergic skin reaction.

Indication of Immediate Medical Attention/Special Treatment: If product gets in eyes, immediately flush with water.

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. Combustion products include oxides of carbon and nitrogen, oxides of sulfur, sulfuric acid, organic acids, and other toxic organic compounds.

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 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 glasses/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: Off-white to tan liquid

Odor: Pungent

Odor Threshold: No data available

pH: Not applicable

Melting Point: No data available

Boiling Point: No data available

Flash Point: >176°C (350°F)

Evap. Rate: No data available

Upper/Lower Flammability Limits: No data available
Vapor Pressure: <0.1 mm Hg @ 25°C
Vapor Density: No data available
Relative Density: 1.02 @ 25°C
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: 600 cP @ 25°C

10. Stability and Reactivity

Reactivity: Not normally reactive.
Chemical Stability: Stable under recommended conditions.
Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Avoid excessive heat and exposure to sunlight. Avoid moisture.
Incompatible Materials: Avoid contact with strong acids and strong oxidizing agents.
Hazardous Decomposition Products: Thermal decomposition will generate oxides of carbon and nitrogen, oxides of sulfur, organic acids, and/or other toxic organic compounds.

11. Toxicological Information

Eye Contact: May cause eye irritation.
Skin Contact: May cause mild irritation.
Inhalation: Vapors and mists may cause mild respiratory irritation.
Ingestion: No data available.
Chronic Health Effects: Mixture has not been tested.
Acute Toxicity Values: Mixture has not been tested, but based on calculated LD50, product is not classified as acutely toxic.
Dimethylthiolenediamine: Oral rat LD50 1515 mg/kg; Dermal rabbit LD50 >2000 mg/kg.
Skin Corrosion/Irritation: Relevant components are not skin irritants.
Eye Damage/Irritation: Relevant components are not eye irritants.
Respiratory Irritation: Relevant components are not respiratory irritants.
Respiratory Sensitization: Relevant components are not respiratory sensitizers.
Skin Sensitization: Dimethylthiolenediamine ingredient was positive in the guinea pig assay for skin sensitization.
Germ Cell Mutagenicity: Components are not mutagens.
Carcinogenicity: Components are not carcinogens.
Reproductive Toxicity: Components are not reproductive toxins.
Specific Target Organ Toxicity: Single Exposure: May cause skin or eye irritation. Repeat Exposure: May cause skin sensitization.

12. Ecological Information

Ecotoxicity: Based on the concentration of dimethylthiolenediamine, product is classified as hazardous to the aquatic environment (Aquatic Toxicity - Chronic Category 3).
Dimethylthiolenediamine: Oncorhynchus mykiss LC50 16.9 mg/L/96 hr; Daphnia EC50 0.9 mg/L/48 hr.
Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.

13. Disposal Considerations

Dispose according to local, state and federal regulations. For U.S.: Upon disposal, this product is not a RCRA hazardous waste (per 40 CFR 261).

14. Transport Information

Not regulated as a hazardous material by US DOT (49 CFR 171), IMDG or IATA.

Emergency Shipping Information: 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 components in this product are listed on TSCA.

STATE REGULATIONS:

California Proposition 65: This product is not known to contain substances known to the State of California to cause cancer and/or reproductive harm.

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: Revisions throughout. Replaces SDS dated June 4, 2013.

Disclaimer: The information contained herein is considered accurate; however, Polytek® Development Corp. 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.