



Material Safety Data Sheet

Reoflex® Series Dry and Wet

MSDS No. 630

Date of Preparation: February 18, 2014

Revision: 0006

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Reoflex® 20, 30, 40, 50 and 60 Part A

General Use: Polyurethane Elastomer

Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042

Phone (610) 252-5800, FAX (610) 252-6200

Emergency Contact: Chem-Tel

Domestic 800-255-3924

International 813-248-0585

Section 2 - Hazards Identification

Hazard Designation:

Europe



Xn: Harmful

Canada



HMIS	
H	2
F	1
R	1

Information pertaining to particular dangers

R20: Harmful by inhalation.

R40: Limited evidence of a carcinogenic effect.

R42: May cause sensitization by inhalation.

Classified according to Articles 6 & 7 of Directive 1999/45/EC

Section 3 – Composition / Information on Ingredients

Component	ACGIH TWA	OSHA PEL	Hazard Designation	Weight Percent (%)
diisononyl phthalate CAS Number: 68515-48-0 EINECS Number: 271-090-9	None Established	None Established	None	<25
toluene diisocyanate CAS Number: 26471-62-5 EINECS Number: 247-722-4	0.036 mg/m ³	0.005 ppm	Xn	<1

Section 4 – First Aid Measures

Inhalation: Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.

Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.

Skin Contact: In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse; seek medical attention if rash develops.

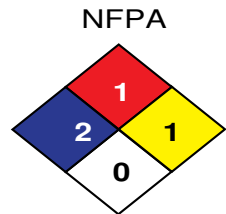
Ingestion: Do not induce vomiting unless instructed by a physician. Contact physician immediately

After first aid, get appropriate in-plant, paramedic, or community medical support.

MSDS No. 630

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Section 5 – Fire-Fighting Measures**Flash Point:** >270 °F (132°C)**Flash Point Method:** TOC**LEL:** Not Established**UEL:** Not Established**Flammability Classification:** Non-Flammable**Extinguishing Media:** Water Fog, Dry Chemical, Carbon Dioxide Foam**Unusual Fire or Explosion Hazards:** Hazardous decomposition products may be formed. Avoid water contamination in closed containers or confined areas as exothermic heat and carbon dioxide can evolve.**Fire-Fighting Instructions:** Fire fighters should wear self contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.**Section 6 – Accidental Release Measures****Spill /Leak Procedures:** Only properly protected personnel should remain in the spill area; dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.**Section 7 – Handling and Storage****Handling Precautions:** Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. If ventilation is not sufficient, wear proper respiratory equipment. Avoid moisture contamination. Reseal partial containers. Use good general housekeeping procedures.**Storage Requirements:** Store in cool dry, well-ventilated area.**Section 8 – Exposure Controls / Personal Protection****Respiratory Protection:** Follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics

MSDS No. 630

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Revision: 0006

Section 9 – Physical and Chemical Properties

Physical State: Liquid	Water Solubility: Negligible:
Appearance : Clear yellow viscous liquid	Boiling Point: None (Polymeric Resin)
Odor : Sharp pungent odor	% Volatile: Nil
Vapor Pressure: None (Polymeric Resin)	Freezing/Melting Point: None (Polymeric Resin)
Vapor Density (Air=1): >1	Viscosity: 50 poise
Specific Gravity (H₂O=1, at 4 °C): 1.04	

Section 10 – Stability and Reactivity

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization can occur.

Chemical Incompatibilities: Strong bases, water, amines, alcohols.

Conditions to Avoid: Avoid contamination with water and other materials that react with Isocyanates.

Hazardous Decomposition Products: TDI vapors, hydrogen cyanide gas, oxides of nitrogen, carbon monoxide and carbon dioxide

Section 11- Toxicological Information

Hazardous Component	LD50 Oral	LC50 Inhalation
Toluene Diisocyanate (TDI)	Rat: 5800 mg/kg	Rat: 140ppm/4hr. Mouse: 10ppm/4hr.

Section 12 – Ecological Information

None Established

Section 13 – Disposal Considerations

Disposal: These materials must be disposed of in accordance with local regulations.

Section 14 – Transport Information

DOT	IATA	IMDG
Not Regulated	Not Regulated	Not Regulated

Section 15 – Regulatory Information**United States EPA Regulations:**

CERCLA Hazardous Substance (40 CFR 302.4) listed specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

<u>Chemical Name</u>	<u>RQ</u>	<u>% Reportable Component</u>
Toluene Diisocyanate	100 lbs.	<1.0

SARA EHS (Extremely Hazardous Substance) (40 CFR 355):

<u>Chemical Name</u>	<u>CAS #</u>	<u>% by Weight</u>
Toluene Diisocyanate	26471-62-5	<1.0

MSDS No. 630

Reoflex® Series Dry And Wet

Revision: 0006

Section 15 – Regulatory Information (Continued)

These products contain the following chemicals that are subject to release reporting requirements under **section 313 of SARA Title III.**

<u>Chemical Name</u>	<u>CAS #</u>	<u>% by Weight</u>
Toluene Diisocyanate	26471-62-5	<1.0

TSCA Inventory Status (40 CFR710): All components of this formulation are listed in the TSCA Inventory.


California Proposition 65 Warning: This product contains a chemical that has been identified by the State of California to cause cancer.

Canadian Regulations;

WHMIS Identification: **D2A, D2B**

CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): **Listed on CDSL**

**Labeling according to EEC Directive**

Risk Phrases	Symbol(s) Required for EU Label	Safety Phrases
R20: Harmful by inhalation. R40: Limited evidence of a carcinogenic effect. R42: May cause sensitization by inhalation	 Xn: Harmful	S1/2: Keep locked up and out of reach of children S23: Do not breath vapors S36/37: Wear suitable protective equipment. S45: In case of an accident or if you feel sick , seek medical attention S61: Avoid release to the environment. Refer to special instructions/safety data sheets.

16 – Other Information

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directive 1907/2006/EEC (REACH). Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European Union (EU/EEC) directive 1907/2006/EEC and are considered trade secrets under US Federal Law (29CFR and 40CFR), Canadian Law (Health Canada Legislation), and European Union Directives.



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Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200

Emergency Contact: Chem-Tel

Domestic 800-255-3924
International 813-248-0585

Section 2- Hazards Identification

Hazard Designation:

Europe



Xn: Harmful

Canada



N: Dangerous
for the Environment



HMIS	
H	2
F	1
R	0

Information pertaining to particular dangers

R21/22: Harmful in contact with skin and if swallowed.

R36: Irritating to eyes.

R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50/53: Very toxic to aquatic organisms may cause long term adverse effects in the aquatic environment.

Classified according to Articles 6 & 7 of Directive 1999/45/EC

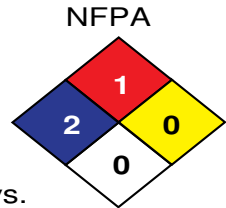
Section 3 – Composition / Information on Ingredients

Component	ACGIH TWA	OSHA PEL	Hazard Designation	Weight Percent (%)
diisononyl phthalate CAS Number: 68515-48-0 EINECS Number: 271-090-9	None Established	None Established	None	<50
diethyltoluenediamine CAS Number: 68479-98-1 EINECS Number: 270-877-4	None Established	None Established	Xn N	1-5
di(methylthio)toluene diamine CAS Number: 106264-79-3 EINECS Number: 403-240-8 (Reoflex® 50 & 60 Only)	None Established	None Established	Xn N	<10

MSDS No. 630

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Section 4 - First Aid Measures**Inhalation:** Remove source(s) of contamination and move victim to fresh air.**Eye Contact:** Flush eyes with plenty of water. If irritation persists, seek medical attention.**Skin Contact:** In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse.**Ingestion:** Do not induce vomiting unless instructed by a physician. Contact physician immediately**After first aid, get appropriate in-plant, paramedic, or community medical support.****Section 5 - Fire-Fighting Measures****Flash Point:** >270 °F (132°C)**Flash Point Method:** PMCC**Flammability Classification:** Non-Flammable**Extinguishing Media:** Water Fog, Dry Chemical, and Carbon Dioxide Foam**Unusual Fire or Explosion Hazards:** None**Fire-Fighting Instructions:** Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.**Section 6 - Accidental Release Measures****Spill /Leak Procedures:** Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely.**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).**Section 7 - Handling and Storage****Handling Precautions:** Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. If ventilation is not sufficient, wear proper respiratory equipment. Use good general housekeeping procedures.**Storage Requirements:** Store in cool dry, well-ventilated area.**Section 8 - Exposure Controls / Personal Protection****Respiratory Protection:** Follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

MSDS No. 630

Reoflex® Series Dry and Wet

Revision: 0006

Section 8 - Exposure Controls / Personal Protection (continued)

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics

Section 9 - Physical and Chemical Properties**Physical State:** Liquid**Appearance :**

Off White-Light Yellow

Odor : Sharp pungent odor**Vapor Pressure:** None (Polymeric Resin)**Vapor Density (Air=1):** >1**Specific Gravity (H₂O=1, at 4 °C):** 1.01**Water Solubility:** Negligible:**Boiling Point:** None (Polymeric Resin)**% Volatile:** Nil**Freezing/Melting Point:** None Determined**Viscosity:** 3 poise**Evaporation Rate:** None (Polymeric Resin)**Section 10 - Stability and Reactivity**

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization can not occur.

Chemical Incompatibilities: Strong acids and oxidizers.

Conditions to Avoid: Avoid contamination with water and other materials that react with amines.

Thermal Decomposition Products: Oxides of nitrogen, carbon monoxide and carbon dioxide

Section 11- Toxicological Information

None Established

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: These materials must be disposed of in accordance with applicable local regulations.

Section 14 - Transport Information**DOT**

Not Regulated

IATA

Not Regulated

IMDG

Not Regulated

Section 15 - Regulatory Information**United States EPA Regulations:**

US TSCA Inventory Status (40 CFR 710): All components of this product are listed on the TSCA inventory.


California Proposition 65 Warning: This product contains a chemical that has been identified by the State of California to cause cancer.

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Section 15 - Regulatory Information (Continued)**Canadian Regulations;**WHMIS Identification: **D2A, D2B**CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): **Listed on CDSL****Labeling according to EEC Directive**

Risk Phrases	Symbol(s) Required for EU Label	Safety Phrases
<p>R21/22: Harmful in contact with skin and if swallowed.</p> <p>R36: Irritating to eyes.</p> <p>R43: May cause sensitization by skin contact.</p> <p>R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.</p> <p>R50/53: Very toxic to aquatic organisms may cause long term adverse effects in the aquatic environment.</p>	 <p>Xn: Harmful</p>	<p>S2: Keep out of reach of children.</p> <p>S24: Avoid contact with skin.</p> <p>S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>S28: After contact with skin, wash immediately with plenty of soap-suds.</p> <p>S36/37/39: Wear suitable protective clothing, gloves and eye and face protection.</p> <p>S60: This material and container must be disposed as hazardous waste.</p> <p>S61: Avoid release to the environment. (See MSDS).</p>

16 - Other Information

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MSDS No. 630

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