Material Safety Data Sheet

Smooth Cast 380 **MSDS No. 436**

Date of Preparation: June 2, 2011 Revision: 0000

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Smooth Cast 380 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

Not hazardous according to United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and Council directive 1999/45/EC and its subsequent amendments

HMIS	
H	1
F	1
R	0

Section 3 - Composition / Information on Ingredients

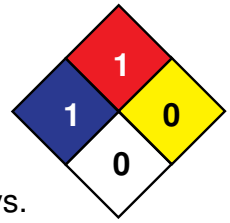
No hazardous ingredients

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

NFPA



Flash Point: >390°F (199°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 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

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: off-white liquid
Odor: Mild odor
Vapor Pressure: None (Polymeric Resin)
Vapor Density (Air=1): >1
Specific Gravity (H_2O=1, at 4 °C): 1.7
Water Solubility: Negligible:
Boiling Point: None (Polymeric Resin)
% Volatile: Nil
Freezing/Melting Point: None Determined
Viscosity: 20 poise
Evaporation Rate: None (Polymeric Resin)

Section 10 - Stability and Reactivity

Stability: This product is 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

Acute Inhalation Effects: None established
Acute Oral Effects: None Established

Toxicity Data:

Reproductive Toxicity: None Established
Mutagenicity: None Established
Teratogenicity: None Established
Sensitization: None Established

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: This material must be disposed of in accordance with applicable local regulations.

Section 14 - Transport Information

DOT	IATA	IMDG
Not Regulated	**Not Regulated**	**Not Regulated**

Section 15 - Regulatory Information

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

California Proposition 65**:** This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm

WHMIS Identification: **Not controlled**
CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): **All are Listed**

Labeling according to EEC Directive

No special packaging or labeling requirements

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.

Material Safety Data Sheet

Smooth Cast 380 **MSDS No. 436**

Date of Preparation: June 2, 2011 Revision: 0000

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Smooth Cast 380 Part B
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
R36/37/38: Irritating to eyes, respiratory system and skin
R40: Limited evidence of a carcinogenic effect
R48/20: Harmful; danger of serious damage to health by prolonged exposure through inhalation

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

Section 3 - Composition / Information on Ingredients

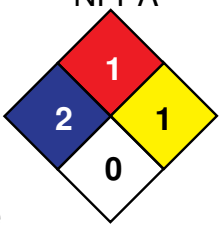
Component	ACGIH TWA	OSHA PEL	Hazard Designation	Weight Percent (%)
Polymethylene polyphenyl isocyanates CAS Number: 9016-87-9 EINECS Number: Not Classified	None Established	None Established	None Established	**15-20**
4,4' Methylene bis(phenylisocyanate) **(MDI)** CAS Number: 101-68-8 EINECS Number: 202-966-0	0.005 ppm	0.02 ppm	Xn	**10-15**

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.

Section 5 - Fire-Fighting Measures

NFPA



Flash Point: 390°F (200°C)
Flash Point Method: COC
LEL: Not Established
UEL: Not Established
Flammability Classification: Non-Flammable
Extinguishing Media: Water Fog, Dry Chemical, and 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 facepiece 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 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.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance : Tan liquid
Odor : Characteristic odor
Vapor Pressure: <0.00001 @ 25°C
Vapor Density (Air=1): 8.6
Specific Gravity (H_2O=1, at 4 °C): 1.70
Water Solubility: Negligible:
Boiling Point: None Determined
% Volatile: Nil
Freezing/Melting Point: None Determined
Viscosity: 5 poise
Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: This product is 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: MDI vapors, hydrogen cyanide gas, oxides of nitrogen, carbon monoxide and carbon dioxide

Section 11- Toxicological Information

Hazardous Component	LD50 Oral	LC50 Inhalation
4,4' Methylene bis(phenylisocyanate) **(MDI)**	Mouse: 2200 mg/kg Rat: 9200 mg/kg	Rat: 178 mg/m^3

Section 12 - Ecological Information

For MDI:
Aquatic: Rapidly hydrolyzes to form an insoluble crust. Terrestrial: Will bind with moist soil no leaching will occur. Atmospheric: Remains in the vapor phase and half life is 32 hours. Will not biodegrade.

Section 13 - Disposal Considerations

Disposal: This material 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:

Clean Air Act
SOCMI Chemical: 4, 4' Methylene bis(phenylisocyanate) Hap Code: XOV

This product contains the following chemicals that are subject to release reporting requirements under **section 313 of SARA Title III.**

Chemical Name	CAS #	% by Weight
4, 4' Methylene bis(phenylisocyanate)	101-68-8	15.0 Max
Polymethylene polyphenyl isocyanate	9016-87-9	20.0 Max

Section 15 - Regulatory Information (Continued)

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

California Proposition 65**:** This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

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 **R36/37/38**: Irritating to eyes, respiratory system and skin **R40**: Limited evidence of a carcinogenic effect **R48/20**: Harmful; danger of serious damage to health by prolonged exposure through 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

16 - Other Information

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