Material Safety Data Sheet

C-1509 **MSDS No. 469**

Date Of Preparation: May 23, 2008 Revision: 0012

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: C-1509 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 - Composition / Information on Ingredients

Component	CAS Number	ACGIH TWA	Exposure Limits OSHA PEL	Weight Percent (%)
Polyurethane Polymer	-	None Established	None Established	**40-45**
4, 4' Methylene bis(phenylisocyanate)	101-68-8	0.005 ppm	0.02 ppm	**55-60**

Section 3 - Hazards Identification

HMIS	
H	2
F	1
R	1

Potential Health Effects

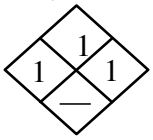
Primary Entry Routes: Inhalation and Dermal
Target Organs: Lungs, skin
Acute Effects Inhalation: Vapors are minimal due to low vapor pressure; if sprayed as an aerosol excessive concentrations are attainable that could be hazardous on single exposure. Excessive exposure can cause irritation to respiratory tract and irritation of the eyes. Effects may be delayed. Decreased ventilatory capacity has been associated with exposure to similar isocyanates.
Eye: May cause irritation, redness, tearing, blurred vision. Prolonged vapor contact may cause conjunctivitis.
Skin: Contact will cause irritation , reddening, swelling, rash, scaling or blistering. Prolonged or repeated contact can cause moderate dermatitis.
Ingestion: May have corrosive effects on the linings of the mouth and stomach: symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.
Carcinogenicity: IARC, NTP, and OSHA do not list any components of this product as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure: skin allergies and respiratory disorders

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 (199°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**.**
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. 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

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *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). 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 : Clear yellow to slightly turbid
Odor : Musty odor
Vapor Pressure: <0.00001 @ 25°C
Vapor Density (Air=1): 8.6
Specific Gravity (H_2O=1, at 4 °C): 1.15

Water Solubility: Reacts with water
Boiling Point: 392°F(200°C)
% Volatile: Nil
Freezing/Melting Point: None Determined
Viscosity: 5.6 poise
Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: This Part A 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

Eye Effects: Irritation
Skin Effects: Irritation

Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: This material must be disposed of in accordance with applicable Federal, state, and local regulations.

Section 14 - Transport Information

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

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
Clean Air Act
SOCMI Chemical: 4, 4' Methylene bis(phenylisocyanate) Hap Code: XOV
SARA Toxic Chemical (40 CFR 372.65): None
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	60.0 Max

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): None
TSCA Inventory Status (40 CFR710): All components of this formulation are listed in the TSCA Inventory.

State Regulations:

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

16 - Other Information

Prepared By: Dominick J. Finocchio
Title: Technical Director
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.

Material Safety Data Sheet

C-1509 **MSDS No. 469**

Date Of Preparation: May 23, 2008 Revision: 0012

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: C-1509 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 - Composition / Information on Ingredients

Component	CAS Number	ACGIH TWA	Exposure Limits OSHA PEL	Weight Percent (%)
New Jersey Trade Secret #221290880-5004P	-	None Established	None Established	**75-80**
New Jersey Trade Secret #221290880-5014P	-	None Established	None Established	**20-25**

Section 3 - Hazards Identification

HMIS	
H	1
F	1
R	1

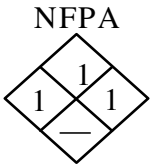
Potential Health Effects

Primary Entry Routes: Dermal
Target Organs: Skin and eyes.
Acute Effects
Inhalation: Vapors, which are not significant unless heated or sprayed can cause irritation to respiratory tract.
Eye: May cause irritation, redness, tearing.
Skin: Contact will cause irritation and reddening swelling.
Ingestion: Effects are unknown.
Carcinogenicity: IARC, NTP, and OSHA do not list any components of this product as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure: Pre-existing skin disorders.
Chronic Effects of Overexposure: None Known

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; 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



Flash Point: >390°F (199°C)
Flash Point Method: COC
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 facepiece 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

Engineering Controls:
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear an MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *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). 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: Opaque white liquid
Odor: Mild odor
Vapor Pressure: None (Polymeric Resin)
Vapor Density (Air=1): >1
Specific Gravity (H_2O=1, at 4 °C): 1.1
Water Solubility: Negligible**:**
Boiling Point: None (Polymeric Resin)
% Volatile: Nil
Freezing/Melting Point: None Determined
Viscosity: 14 poise
Evaporation Rate: None (Polymeric Resin)

Section 10 - Stability and Reactivity

Stability: C-1509 Part B 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 Federal, state and local regulations.

Section 14 - Transport Information

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

Section 15 - Regulatory Information

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

CERCLA Hazardous Substance (40 CFR 302.4) listed per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112: None

SARA Toxic Chemical (40 CFR 372.65): None

Section 15 - Regulatory Information (continued)

This product contains the following chemicals that are subject to release reporting requirements under section 313 of SARA Title III. None

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

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

State Regulations:

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.

16 - Other Information

Prepared By: Dominick J. Finocchio
Title: Technical Director

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