

Material Safety Data Sheet

Ease Release 205

MSDS No. 7128

Date of Preparation: June 18, 2012 Revision: 0008

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Ease Release 205

General Use: Mold Release Agent

Manufacturer: Mann Release Technologies 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 F: Highly Flammable N: Dangerous for the environment

Risk phrases pertaining to particular dangers:

R11: Highly flammable.

R38: Irritating skin.

R67: Vapors may cause drowsiness and dizziness.

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 (%)
Alkanes, C7-C10-Iso CAS Number: 90622-56-3 EINECS Number: 292-458-5	None Established	None Established	Xn b F	80-85%

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.

Ingestion: Ingestion is unlikely route of exposure. Do not induce vomiting unless instructed by a physician.

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

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Section 5 - Fire-Fighting Measures

FlashPoint: >19°F (-7°C)

Flammable Limits: LEL: 1.5 UEL: 11.6 Note: Approximate

Flash Point Method: TCC

Autoignition Temperature: 750°F (400°C) Note: Approximate

Flammability Classification: Flammable Liquid

General Hazard: Material will readily ignite at ambient temperatures. Material can accumulate static charges, which can cause an incendiary electrical discharge. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous.

DO NOT Pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; They may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

Extinguishing Media: Water Fog, Dry Chemical, and Carbon Dioxide Foam

Unusual Fire or Explosion Hazards: None

Fire-Fighting Instructions: Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam. Avoid spraying water directly onto storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

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 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.

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Section 8 - Exposure Controls / Personal Protection (continued)

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

Product Form: Liquid Vapor Density (Air=1): ~4 Appearance and Odor: Clear, Slight Water Solubility: insoluble

ethereal odor **Boiling Point:** 05°-255°F (96°-107°C) Vapor Pressure: ~63mm @ 68°F (20°C)

Evaporation Rate:(butyl acetate =1) ~5.6 Specific Gravity: 0.72 **Volatile Organic Compounds**

(grams/liter): 651

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 cannot occur.

Hazardous Decomposition Products: Thermal oxidative decomposition can produce, silicone dioxide, carbon oxides and traces of incompletely burned carbon compounds, formaldehyde.

Section 11- Toxicological Information

Hazardous Component	LD50 Oral	LC50 Skin
Alkanes, C7-C10-Iso	1000 mg/kg	3160 mg/kg

Section 12 - Ecological Information

Very toxic to aquatic organisms may cause long term adverse effects in the aquatic environment.

Mobility;

Material is highly volatile, will partition to air. Will not partition to sediment and wastewater solids Aquatic: Rapidly hydrolyzes to form an insoluble crust.

Material is expected to degrade rapidly in air.

Section 13 - Disposal Considerations

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

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Section 14 - Transport Information

DOT IATA IMDG

Shipping Name: Octanes Shipping Name: Octanes Shipping Name: Octanes

Hazard Label: Hazard Label: Hazard Label: Flammable Liquid Flammable Liquid Flammable Liquid

UN #: 1262
Hazard Class: 3
Packing Group: || UN #: 1262
Hazard Class: 3
Packing Group: || Packing Group: ||

Section 15 - Regulatory Information

United States EPA Regulations:

Clean Air Act: SOCMI Chemical: Alkanes, C7-C10-Iso Hap Code: XOV

CERCLA Hazardous Substance (40 CFR 302.4) RQ: 1,000 pounds

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

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

Canadian Regulations:

WHMIS Identification: CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).



Labeling according to EEC Directive

Risk Phrases	Symbol(s) Required for EU Label	Safety Phrases
R11: Highly flammable.		S2: Keep out of reach of
R38: Irritating skin.		children.
R67: Vapors may cause		S9 : Keep container in a well
drowsiness and	Xn: Harmful	ventilated area.
dizziness.		\$16: Keep away from sources.
R50/53: Very toxic to	- Mar.	of ignition. No Smoking
aquatic organisms may		\$29: Do not empty into drains.
cause long term adverse	F:Highly Flammable	S33: Take precautionary
effects in the aquatic	1 .mgmy i lammable	measures against static
environment.	340	discharge.
		\$60 : This material and
	No Department for the	container must be disposed
	N: Dangerous for the	as hazardous waste.
	environment	S61: Avoid release to the
		environment. (See MSDS).
		S62: If swallowed do not
		induce vomiting Seek medical
		advice immediately and show this label.
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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 Mann Release Technologies 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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Material Safety Data Sheet OOMOO® Series

MSDS No. 821

Date Of Preparation: February 19, 2013 Revision: 0007

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: OOMOO® Series Part A

General Use: Silicone 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), the Canadian Workplace Hazardous Materials Information System (WHMIS) and Council directive 1999/45/EC and its subsequent amendments.



NFPA

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

Flash Point: >300 °F

Flash Point Method: PMCC LEL: Not Established UEL: Not Established

Flammability Classification: Non-Flammable

Extinguishing Media: Dry Chemical, Carbon Dioxide, and 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).

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Section 7 - Handling and Storage

Handling Precautions: Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective 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 eyeand 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: Viscous Liquid

Appearance:

OOMOO 30 Red viscous liquid OOMOO 25 Green viscous liquid

Odor: Sweet odor

Vapor Pressure: None (Polymeric Resin)

Vapor Density (Air=1): >1

Specific Gravity (H2O=1, at 4 °C): 1.18

Water Solubility: Insoluble

Boiling Point: None (Polymeric Resin)

% Volatile: Nil

Freezing/Melting Point: None (Polymeric

Resin)

Viscosity: 200 poise

Evaporation Rate: Not Applicable

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 bases, and acids.

Hazardous Decomposition Products: Silica, carbon monoxide and carbon dioxide

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Section 11- Toxicological Information

Carcinogenicity: None Determined Eve Effects: Irritation Mutagenicity: None Determined Skin Effects: Irritation Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: 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

United States Regulations

EPA Regulations:

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

SARA Toxic Chemical (40 CFR 372.65): None

These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

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

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

CANADA Regulations

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

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Section 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.

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Material Safety Data Sheet OOMOO® Series

Date Of Preparation: February 19, 2013

Revision: 0007

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: OOMOO® Series Part B

General Use: Silicone 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), the Canadian Workplace Hazardous Materials Information System (WHMIS) and Council directive 1999/45/EC and its subsequent amendments.



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

Flash Point: >300 °F

Flash Point Method: PMCC

LEL: Not Established **UEL:** Not Established

Flammability Classification: Non-Flammable

Extinguishing Media: Dry Chemical, Carbon Dioxide, and 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.



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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: 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 eyeand 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: Viscous Liquid Water Solubility: Insoluble

Appearance : Blue viscous liquid Boiling Point: None (Polymeric Resin)

Odor: Sweet odor % Volatile: Nil

Vapor Pressure: None (Polymeric Resin) Freezing/Melting Point: None (Polymeric

Vapor Density (Air=1): >1 Resin)

Specific Gravity (H2O=1, at 4 °C): 1.5 Viscosity: 200 poise Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization can not occur. **Chemical Incompatibilities:** Strong bases, and acids.

Hazardous Decomposition Products: Silica, carbon monoxide and carbon dioxide

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Section 11- Toxicological Information

Carcinogenicity: None Determined Eve Effects: Irritation Mutagenicity: None Determined Skin Effects: Irritation Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: 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

United States Regulations

EPA Regulations:

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

SARA Toxic Chemical (40 CFR 372.65): None

These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

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

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.

CANADA Regulations

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.

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Section 16 - Other Information

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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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Material Safety Data Sheet

Smooth-Cast 300 Series

MSDS No. 476

HMIS

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Revision: 0010

Date of Preparation: April 5, 2012

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Smooth-Cast 300, 300Q, 305 and 310 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:



Canada



Xn = Harmful

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 (%)
4,4' Methylene bis(phenylisocyanate) (MDI) CAS Number: 101-68-8 EINECS Number: 202-966-0	0.005 ppm	0.02 ppm	Xn	55-60

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.

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Smooth-Cast 300 Series

Section 5 - Fire-Fighting Measures

Flash Point: 262 °F (128 °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 Standard EN 149; wear an MSHA/NIOSH or European Standard EN149 approved respirator.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eyeand 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

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Smooth-Cast 300 Series

Section 9 - Physical and Chemical Properties

Water Solubility: Reacts with water Physical State: Liquid Appearance: Pale amber liquid **Boiling Point:** None determined

Odor: Characteristic odor % Volatile: Nil

Vapor Pressure: <0.00001 @ 25 ℃ Freezing/Melting Point: None Determined

Viscosity: 1 poise Vapor Density (Air=1): 8.6

Specific Gravity (H2O=1, at 4 °C): 1.10 **Evaporation Rate:** Not Applicable

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

Isocvanates.

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

Section 14 - Transport Information

DOT **IMDG IATA 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

These products contain 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

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Smooth-Cast 300 Series

Section 15 - Regulatory Information (Continued)

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

<u>California Proposition 65</u>: 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.

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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Material Safety Data Sheet

Smooth-Cast 300 Series

MSDS No. 476

Revision: 0010

Date of Preparation: April 5, 2012

Section 1 - Chemical Product and Company Identification

Product/Chemical Name Smooth-Cast 300, 300Q, 305 and 310 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

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



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

Flash Point: 262°F (128°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.

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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 Standard EN 149; wear an MSHA/NIOSH or European Standard EN149 approved respirator.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eyeand 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 Water Solubility: Negligible:

Appearance: Clear colorless liquid Boiling Point: None (Polymeric Resin)

Odor: Mild odor % Volatile: Nil

Vapor Pressure: None (Polymeric Resin) Freezing/Melting Point: None Determined

Vapor Density (Air=1): >1 Viscosity: 1.2 poise

Specific Gravity (H2O=1, at 4 °C): 1.00 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

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Section 11- Toxicological Information

Toxicity Data:

Acute Inhalation Effects: None

established

Acute Oral Effects: None

Established

Reproductive Toxicity: None Established Mutagenicity: None Established

Mutagenicity: None Established Teratogenicity: None Established Sensitization: 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 IATA IMDG

Not Regulated Not Regulated Not Regulated

Section 15 - Regulatory Information

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

<u>California Proposition 65</u>: 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

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

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Smooth-Cast 300 Series

16 - Other Information

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MSDS No. 845



Material Safety Data Sheet

SuperSeal[®]

Date of Preparation: January 15, 2013 Revision: 0006

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: SuperSeal®

General Use: Release Agent

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 F: Highly Flammable

Risk phrases pertaining to particular dangers

R11: Highly flammable. **R36:** Irritating to the eyes.

R38: Irritating skin.

R65: Harmful: may cause lung damage if swallowed. **R67**: Vapors may cause drowsiness and dizziness.

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 (%)
Alkanes, C7-C10-Iso CAS Number: 90622-56-3 EINECS Number: 292-458-5	None Established	None Established	X n № F	70-90%
Propan-2-ol CAS Number: 67-63-0 EINECS Number: 200-661-7	200 ppm	400 ppm	X Xn ₺ F	5-15%

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.

Ingestion: Ingestion is unlikely route of exposure. Do not induce vomiting unless instructed by a physician.

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

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Section 5 - Fire-Fighting Measures

FlashPoint: $>19 \,^{\circ}\text{F} (-7 \,^{\circ}\text{C})$

Flammable Limits: LEL: 1.5 UEL: 11.6 Note: Approximate

Flash Point Method: TCC

Autoignition Temperature: 750°F (400°C) Note: Approximate

Flammability Classification: Flammable Liquid

General Hazard: Material will readily ignite at ambient temperatures.

Material can accumulate static charges, which can cause an incendiary electrical

discharge. "Empty" containers retain product residue (liquid and/or vapor)

and can be dangerous. DO NOT Pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; They may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

Extinguishing Media: Water Fog, Dry Chemical, and Carbon Dioxide Foam

Unusual Fire or Explosion Hazards: None

Fire-Fighting Instructions: Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam. Avoid spraying water directly onto storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

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, 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.









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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

Product Form: Liquid Vapor Density (Air=1): ~4
Appearance and Odor: Clear, Slight Water Solubility: insoluble

ethereal odor

Vapor Pressure: ~63mm @ 68°F (20°C)

Boiling Point: 05°-255°F (96°-107°C)

Evaporation Rate:(butyl acetate =1) ~5.6

Specific Gravity: 0.72 Volatile Organic Compounds (grams/liter): 612

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 cannot occur.

Hazardous Decomposition Products: Thermal oxidative decomposition can produce, silicone dioxide, carbon oxides and traces of incompletely burned carbon compounds, formaldehyde.

Section 11- Toxicological Information

Hazardous Component	LD50 Oral	LC50 Skin
Alkanes, C7-C10-Iso	1000 mg/kg	3160 mg/kg

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

DOT IATA IMDG

Shipping Name: OctanesShipping Name: OctanesShipping Name: OctanesHazard Label:Hazard Label:Hazard Label:Flammable LiquidFlammable LiquidFlammable Liquid

UN #: 1262
Hazard Class: 3
Packing Group: || UN #: 1262
Hazard Class: 3
Packing Group: || Packing Group: ||

Section 15 - Regulatory Information

United States EPA Regulations:

Clean Air Act:

SOCMI Chemical: 2, 2, 4 Trimethylpentane Hap Code: XOV CERCLA Hazardous Substance (40 CFR 302.4) RQ: 1,000 pounds

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

<u>California Proposition 65</u>: 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.

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Section 15 - Regulatory Information (continued)

Canadian Regulations;

WHMIS Identification: CLASS B-2: Flammable liquid with a flash point lower than 37.8 ℃ (100 °F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

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
Risk Phrases R11: Highly flammable. R36: Irritating to the eyes. R38: Irritating skin R65: Harmful: may cause lung damage if swallowed. R67: Vapors may cause drowsiness and dizziness F: Highly Flammable	Safety Phrases S2: Keep out of reach of children. S7: keep container tightly closed. S9: Keep container in a well ventilated area. S16: Keep away from sources. of ignition. No Smoking S24/25: Avoid contact with eyes and skin. S26: In case of contact with skin, rinse immediately with plenty of water and seek medical attention. S29: Do not empty into drains. S33: Take precautionary measures against static discharge. S60: This material and container must be disposed as hazardous waste. S61: Avoid release to the environment. (See MSDS). S62: If swallowed do not induce vomiting Seek medical advice immediately and show this label.

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