Dragon Skin[™] Series Addition Cure Silicone Rubber Compounds



PRODUCT OVERVIEW

Cured Material www.smooth-on.com Certified Skin Safe!

Dragon Skin[™] silicones are high performance platinum cure liquid silicone compounds that are used for a variety of applications ranging from creating skin effects and other movie special effects to making production molds for casting a variety of materials. Because of the **superior physical properties** and flexibility of Dragon Skin[™] rubbers, they are also used for medical prosthetics and cushioning applications. Dragon Skin[™] rubbers are also used for a variety of a variety of a constant -65°F to +450°F (-53°C to +232°C).

Great for Making Molds for a Variety of Applications - Available in **Shore 10A, 20A and 30A**, Dragon Skin[™] silicones can be used to make exceptionally strong and tear resistant molds for casting plaster, wax, concrete (limited production run), resins and other materials.

Time Tested, Versatile Special Effects Material – Soft, super-strong and stretchy, Dragon Skin[™] 10 (Very Fast, Fast, Medium and Slow speeds) is used around the world to make spectacular skin and creature effects. An infinite number of color effects can be achieved by adding Silc Pig[™] silicone pigments or Cast Magic[™] effects powders. Cured rubber can also be painted with the Psycho Paint[™] system. Cured material is skin safe and certified by an independent laboratory to ISO 10993-10, Biological evaluation of medical devices, Part 10: Tests for irritation and skin sensitization.

Easy To Use – Dragon Skin[™] silicones are mixed 1A:1B by weight or volume. Liquid rubber can be thinned with Silicone Thinner[™] or thickened with THI-VEX[™]. Rubber cures at room temperature (73°F/23°C) with negligible shrinkage. *Vacuum degassing is recommended to minimize air bubbles in cured rubber*.

TECHNICAL OVERVIEW

	Mixed Viscosity (ASTM D-2393)	Specific Gravity	Specific Volume (cu. in./lb.) (ASTM D. 1	Pot Life (ASTM D. 2	Cure Time	Sho	(ASTM D-2240)	Tensile Strength (ASTM D-412)	100% Modulus (ASTM D-412)	Elongation at Break %	Die B Tear Strength (ASTM D-624)	Shrinkage (in./in.) (ASTM D-2566)
Dragon Skin™ 10 Very Fast	23,000 cps	1.07	25.8	4 min.	30 min.	10	A 4	475 psi	22 psi	1000%	102 pli	< .001 in./in.
Dragon Skin™ 10 Fast	23,000 cps	1.07	25.8	8 min.	75 min.	10	A 4	475 psi	22 psi	1000%	102 pli	< .001 in./in.
Dragon Skin™ 10 Medium	23,000 cps	1.07	25.8	20 min.	5 hours	10	A 4	475 psi	22 psi	1000%	102 pli	< .001 in./in.
Dragon Skin™ 10 Slow	23,000 cps	1.07	25.8	45 min.	7 hours	10	A 4	475 psi	22 psi	1000%	102 pli	< .001 in./in.
Dragon Skin™ 20	20,000 cps	1.08	25.6	25 min.	4 hours	20	A	550 psi	49 psi	620%	120 pli	< .001 in./in.
Dragon Skin™ 30	20,000 cps	1.08	25.7	45 min.	16 hours	30	A	500 psi	86 psi	364%	108 pli	< .001 in./in.

Mix Ratio: 1A:1B by volume or weight *Color:* Translucent

Useful Temperature Range: -65°F to +450°F (-53°C to +232°C) **Dielectric Strength** (ASTM D-147-97a): >350 volts/mil

PROCESSING RECOMMENDATIONS

*All values measured after 7 days at 73°F/23°C

PREPARATION... Safety – Use in a properly ventilated area ("room size" ventilation). Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. Wear vinyl gloves only. Latex gloves will inhibit the cure of the rubber.

Store and use material at room temperature (73°F/23°C). Warmer temperatures will drastically reduce working time and cure time. Storing material at warmer temperatures will also reduce the usable shelf life of unused material. These products have a limited shelf life and should be used as soon as possible. Mixing containers should have straight sides and a flat bottom. Mixing sticks should be flat and stiff with defined edges for scraping the sides and bottom of your mixing container.

Cure Inhibition – Addition-cure silicone rubber may be inhibited by certain contaminants in or on the pattern to be molded resulting in tackiness at the pattern interface or a total lack of cure throughout the mold. Latex, tin-cure silicone, sulfur clays, certain wood surfaces, newly cast polyester, epoxy, tin cure silicone rubber or urethane rubber may cause inhibition. If compatibility between the rubber and the surface is a concern, a small-scale test is recommended. Apply a small amount of rubber onto a non-critical area of the pattern. Inhibition has occurred if the rubber is gummy or uncured after the recommended cure time has passed.

Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.

Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

Keep Out of Reach of Children

Be careful. Use only with adequate ventilation. Contact with skin and eyes may cause irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with waterless hand cleaner followed by soap and water.

Important: The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith. **Cure Inhibition** – To prevent inhibition, one or more coatings of a clear acrylic lacquer applied to the model surface is usually effective. Allow any sealer to thoroughly dry before applying rubber. Note: Even with a sealer, platinum silicones will not work with modeling clays containing heavy amounts of sulfur. Do a small scale test for compatibility before using on your project.

Applying A Release Agent - Although not usually necessary, a release agent will make demolding easier when pouring into or over most surfaces. Ease Release[™] 200 is a proven release agent for making molds with silicone rubber. Mann Ease Release[™] products are available from Smooth-On or your Smooth-On distributor.

IMPORTANT: To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces of the model. Follow with a light mist coating and let the release agent dry for 30 minutes.

If there is any question about the effectiveness of a sealer/release agent combination, a small-scale test should be made on an identical surface for trial.

MEASURING & MIXING...

Stir Part A and Part B thoroughly before dispensing. After dispensing required amounts of Parts A and B into mixing container (1A:1B by volume or weight), **mix thoroughly for 3 minutes making sure that you scrape the sides and bottom of the mixing container several times.** After mixing parts A and B, vacuum degassing is recommended to eliminate any entrapped air. Vacuum material for 2-3 minutes (29 inches of mercury), making sure that you leave enough room in container for product volume expansion.

POURING, CURING & MOLD PERFORMANCE...

For best results, pour your mixture in a single spot at the lowest point of the containment field. Let the rubber seek its level up and over the model. A uniform flow will help minimize entrapped air. The liquid rubber should level off at least 1/2" (1.3 cm) over the highest point of the model surface.

Curing / Post Curing - Allow rubber to cure as prescribed at room temperature (73°F/23°C) before demolding. Do not cure rubber where temperature is less than 65°F/18°C. **Optional:** Post curing the mold will aid in quickly attaining maximum physical and performance properties. After curing at room temperature, expose the rubber to 176°F/80°C for 2 hours and 212°F/100°C for one hour. Allow mold to cool to room temperature before using.

If Using As A Mold - When first cast, silicone rubber molds exhibit natural release characteristics. Depending on what is being cast into the mold, mold lubricity may be depleted over time and parts will begin to stick. No release agent is necessary when casting wax or gypsum. Applying a release agent such as Ease Release[™] 200 (available from Smooth-On) prior to casting polyurethane, polyester and epoxy resins is recommended to prevent mold degradation.

Thickening Dragon Skin[™] Silicones - THI-VEX[™] is made especially for thickening Smooth-On's silicones for vertical surface application (making brush-on molds). Different viscosities can be attained by varying the amount of THI-VEX[™]. See the THI-VEX[™] technical bulletin (available from Smooth-On or your Smooth-On distributor) for full details.

Thinning Dragon Skin[™] Silicones - Smooth-On's **Silicone Thinner[™]** will lower the viscosity of Dragon Skin[™] for easier pouring and vacuum degassing. A disadvantage is that ultimate tear and tensile are reduced in proportion to the amount of **Silicone Thinner[™]** added. *It is not recommended to exceed 10% by weight of total system (A+B)*. See the **Silicone Thinner[™] technical bulletin** (available from Smooth-On or your Smooth-On distributor) for full details.

Mold Performance & Storage - The physical life of the mold depends on how you use it (materials cast, frequency, etc.). Casting abrasive materials such as concrete can quickly erode mold detail, while casting non-abrasive materials (wax) will not affect mold detail. Before storing, the mold should be cleaned with a soap solution and wiped fully dry. Two part (or more) molds should be assembled. Molds should be stored on a level surface in a cool, dry environment.



Call Us Anytime With Questions About Your Application. Toll-free: (800) 381-1733 Fax: (610) 252-6200

The new <u>www.smooth-on.com</u> is loaded with information about mold making, casting and more.





Safety Data Sheet

SDS No. 823A

Section 1 - Identification

1.1 Product Identifier: Part A for: Body Double® & Body Double® SILK; Dragon Skin® Series & F/X Pro; Ecoflex® Series & Gel; Encapso® K; Equinox® Series; EZ Brush® Silicone; EZ-Spray® Silicone Series; Mold Max® Series; Mold Star® Series; OOMOO® Series; PoYo® Putty 40; Psycho Paint®; Rebound® Series; Rubber Glass®; Silicone 1515; Silicone 1603; Silicone 3030; Skin Tite®; Smooth-Sil® Series; Solaris®; SomaFoama® Series; SORTA-Clear® Series; Silicone 1708

1.2 General Use: Silicone Elastomer

1.3 Manufacturer: Smooth-On, Inc.,

5600 Lower Macungie Rd., Macungie, PA 18062 Phone (610) 252-5800, FAX (610) 252-6200 SDS@Smooth-On.com

1.4 Emergency Contact: Chem-Tel

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

Section 2 – Hazard(s) Identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture 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 Regulation (EC) No 1272/2008 and subsequent amendments.

2.2 GHS Label elements, including precautionary statements

Pictogram(s): none

Signal word: none

General Precautions:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

Section 3 - Composition / Information on Ingredients

3.1 Substances

No ingredients are hazardous according to Regulation 2012 OSHA Hazard Communication Standard 29 CFR 1910.1200 criteria.

Section 4 - First Aid Measures

4.1 Description of 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: Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed None known.

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

Section 5 - Fire-Fighting Measures

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

5.2 Special hazards arising from the substance or mixture: None known.

5.3 Advice for firefighters: 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. 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

6.1 Personal precautions, protective equipment and emergency procedures: Only properly protected personnel should remain in the spill area; dike and contain spill. Stop or reduce discharge if it can be done safely.

6.2 Environmental precautions: No special environmental precautions required.

6.3 Methods and material for containment and cleaning up: absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution

6.4 Reference to other sections: if appropriate Sections 8 and 13 shall be referred to.

Section 7 - Handling and Storage

7.1 Precautions for safe handling: Use good general housekeeping procedures. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities: Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.

7.3 Specific end use(s): These precautions are for room temperature handling. Other uses including elevated temperatures or aerosol/spray applications may require added precautions.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters: none defined

8.2 Exposure controls:

Respiratory Protection: Should a respirator be needed, 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 equipped with organic vapor cartridges.

Hand Protection: Wear any liquid-tight gloves such as butyl rubber, neoprene or PVC. **Eye Protection:** Safety glasses with side shields 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.

Other Protective Clothing/Equipment: Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

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. Wash thoroughly after handling.

Section 9 - Physical and Chemical Proper	ties
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9.1	Information on	basic physical	and chemical	properties:
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Appearance : viscous liquid Odor/Threshold: Mild to sweet odor pH: N.A. (non-aqueous) Melting Point/Freezing Point: N.A. Low/High Boiling Point: N.A. Flash Point: >300 °F Evaporation Rate: Not available Flammability: f.p. at or above 200 °F UEL/LEL: Not available Vapor Pressure: None (Polymeric Resin) Vapor Density (Air=1): >1 Specific Gravity (H₂O=1, at 4 °C): 1.05-1.15 Water Solubility: Insoluble Partition coefficient: Not available Auto-ignition temperature: Not available Decomposition temperature: Not available Viscosity: 5,000 – 50,000 centipoise % Volatile: Nil

Section 10 - Stability and Reactivity

10.1 Reactivity: No hazardous reactions if stored and handled as prescribed/indicated., No corrosive effect on metal. Not fire propagating.

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

10.3 Possibility of hazardous reactions: Hazardous polymerization cannot occur.

10.4 Conditions to avoid: none known

10.5 Incompatible materials: strong bases and acids

10.6 Hazardous decomposition products: Thermal oxidative decomposition can produce carbon oxides, gasses/vapors, and traces of incompletely burned carbon compounds.

Section 11- Toxicological Information

11.1 Information on toxicological effects:

Skin Corrosion/Irritation: no data

Serious Eye Damage/Irritation: no data

Respiratory/Skin Sensitization: no data

Germ Cell Mutagenicity: no data

Carcinogenicity: No component of these products present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH or NTP.

Reproductive Toxicity: no data

Specific Target Organ Toxicity - Single Exposure: no data

Specific Target Organ Toxicity - Repeated Exposure: no data

Aspiration Hazard: no data

Acute Toxicity: no data

Chronic Exposure: no data

Potential Health Effects - Miscellaneous: no data

Section 12 - Ecological Information

- **12.1 Toxicity:** no data
- 12.2 Persistence and Degradability: no data
- **12.3 Bioaccumulative Potential:** no data
- 12.4 Mobility in Soil: no data
- 12.5 Results of PBT and vPvB assessment: no data
- 12.6 Other Adverse Effects: no data

Section 13 - Disposal Considerations

13.1 Waste treatment methods: Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws. Empty containers retain product residue which may exhibit hazards of material, therefore to not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Section 14 - Transport Information

Not regulated by DOT, IATA or IMDG

14.1 UN number: none

14.2 UN proper shipping name: none

14.3 Transport hazard class(es): not applicable

14.4 Packing group: not applicable

14.5 Environmental hazards: none known

14.6 Special precautions for user: none known

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable

Section 15 - Regulatory Information

15.1 Safety health and environmental regulations/legislation specific for the substance or mixture:

In the United States (EPA Regulations):

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

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

SARA 311/312 Hazards: none

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

15.2 Chemical safety assessment: No chemical safety assessment has been carried out for this substance/mixture by the supplier.



Glossary: ACGIH-American Conference of Governmental Industrial Hygienists; ANSI-American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS-Chemical Abstract Service; Chemtrec-Chemical Transportation Emergency Center (US); CHIP-Chemical Hazard Information and Packaging; DSL-Domestic Substances List; EC-Equivalent Concentration; EH40 (UK)-HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA-Emergency Planning and Community Right-To-Know Act; ESL-Effects screening levels; GHS-Globally Harmonized System of Classification and Labelling of Chemicals; HMIS-Hazardous Material Information Service; IATA-International Air Transport Association; IMDG-International Maritime Dangerous Goods Code; LC-Lethal Concentration; LD-Lethal Dose; LEL-Lower Explosion Level; NFPA-National Fire Protection Association; OEL-Occupational Exposure Limit; OSHA-Occupational Safety and Health Administration, US Dept. of Labor; PEL-Permissible Exposure Limit: SARA (Title III)-Superfund Amendments and Reauthorization Act: SARA 313-Superfund Amendments and Reauthorization Act, Section 313; SCBA-Self-Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ-Texas Commission on Environmental Quality; TLV-Threshold Limit Value; TSCA-Toxic Substances Control Act Public Law 94-469; TWA-Time Weighted Value; UEL-Upper Explosion Level; US DOT-US Department of Transportation; WHMIS-Workplace Hazardous Materials Information System.

Disclaimer: The information contained in this Safety Data Sheet (SDS) 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 SDS is prepared to comply with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as prescribed by the United States (US) Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH).

Classifications of the chemical in accordance with 29 CFR 1910.1200, signal word, hazard and precautionary statement(s), symbol(s) and other information are based on listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS and EC No 1907/2006 and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directives.





Safety Data Sheet

SDS No. 823B

Section 1 - Identification

1.1 Product Identifier: Part B for: Body Double® & Body Double® SILK; Dragon Skin® Series & F/X Pro; Ecoflex® Series & Gel; Encapso® K; Equinox® Series; EZ Brush® Silicone; EZ-Spray® Silicone Series; Psycho Paint®; Mold Star® Series; OOMOO® Series; Rebound® Series; Rubber Glass®; Skin Tite®; Smooth-Sil® Series; Soma Foama® 15 and 25; Solaris®; SORTA-Clear® Series; Silicone 1603; Silicone 1708

1.2 General Use: Silicone Elastomer Crosslinker

1.3 Manufacturer: Smooth-On, Inc.,

5600 Lower Macungie Rd., Macungie, PA 18062 Phone (610) 252-5800, FAX (610) 252-6200

202 (010) 252-5600, FAX (010) 252-6

SDS@Smooth-On.com

Emergency Contact: Chem-Tel

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

Section 2 – Hazard(s) Identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture 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 Regulation (EC) No 1272/2008 and subsequent amendments.

2.2 GHS Label elements, including precautionary statements

Pictogram(s): none

Signal word: none

General Precautions:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

Section 3 - Composition / Information on Ingredients

3.1 Substances

No ingredients are hazardous according to Regulation 2012 OSHA Hazard Communication Standard 29 CFR 1910.1200 criteria.

Section 4 - First Aid Measures

4.1 Description of 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: Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed None known.

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

Section 5 - Fire-Fighting Measures

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

5.2 Special hazards arising from the substance or mixture: None known.

5.3 Advice for firefighters: 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. 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

6.1 Personal precautions, protective equipment and emergency procedures: Only properly protected personnel should remain in the spill area; dike and contain spill. Stop or reduce discharge if it can be done safely.

6.2 Environmental precautions: No special environmental precautions required.

6.3 Methods and material for containment and cleaning up: absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution

6.4 Reference to other sections: if appropriate Sections 8 and 13 shall be referred to.

Section 7 - Handling and Storage

7.1 Precautions for safe handling: Use good general housekeeping procedures. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities: Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.

7.3 Specific end use(s): These precautions are for room temperature handling. Other uses including elevated temperatures or aerosol/spray applications may require added precautions.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters: none defined

8.2 Exposure controls:

Respiratory Protection: Should a respirator be needed, 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 equipped with organic vapor cartridges.

Hand Protection: Wear any liquid-tight gloves such as butyl rubber, neoprene or PVC. **Eye Protection:** Safety glasses with side shields 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.

Other Protective Clothing/Equipment: Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

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. Wash thoroughly after handling.

Section 9 - Physical and Chemical Properties

9.1	Information on	basic ph	nvsical and	chemical	properties:
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Appearance : viscous liquid Odor/Threshold: Mild to sweet odor pH: N.A. (non-aqueous) Melting Point/Freezing Point: N.A. Low/High Boiling Point: N.A. Flash Point: >300 °F Evaporation Rate: Not available Flammability: f.p. at or above 200 °F UEL/LEL: Not available Vapor Pressure: None (Polymeric Resin) Vapor Density (Air=1): >1 Specific Gravity (H2O=1, at 4 °C): 1.07 Water Solubility: Insoluble Partition coefficient: Not available Auto-ignition temperature: Not available Decomposition temperature: Not available Viscosity: 5,000 – 50,000 centipoise % Volatile: Nil

Section 10 - Stability and Reactivity

10.1 Reactivity: No hazardous reactions if stored and handled as prescribed/indicated., No corrosive effect on metal. Not fire propagating.

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

10.3 Possibility of hazardous reactions: Hazardous polymerization cannot occur.

10.4 Conditions to avoid: none known

10.5 Incompatible materials: strong bases and acids

10.6 Hazardous decomposition products: Thermal oxidative decomposition can produce carbon oxides, gasses/vapors, and traces of incompletely burned carbon compounds.

Section 11- Toxicological Information

11.1 Information on toxicological effects:

Skin Corrosion/Irritation: no data

Serious Eye Damage/Irritation: no data

Respiratory/Skin Sensitization: no data

Germ Cell Mutagenicity: no data

Carcinogenicity: No component of these products present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH or NTP.

Reproductive Toxicity: no data

Specific Target Organ Toxicity - Single Exposure: no data

Specific Target Organ Toxicity - Repeated Exposure: no data

Aspiration Hazard: no data

Acute Toxicity: no data

Chronic Exposure: no data

Potential Health Effects - Miscellaneous: no data

Section 12 - Ecological Information

12.1 Toxicity: no data

- 12.2 Persistence and Degradability: no data
- 12.3 Bioaccumulative Potential: no data
- 12.4 Mobility in Soil: no data
- 12.5 Results of PBT and vPvB assessment: no data
- 12.6 Other Adverse Effects: no data

Section 13 - Disposal Considerations

13.1 Waste treatment methods: Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws. Empty containers retain product residue which may exhibit hazards of material, therefore to not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Section 14 - Transport Information

Not regulated by DOT, IATA or IMDG

14.1 UN number: none

14.2 UN proper shipping name: none

14.3 Transport hazard class(es): not applicable

14.4 Packing group: not applicable

14.5 Environmental hazards: none known

14.6 Special precautions for user: none known

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable

Section 15 - Regulatory Information

15.1 Safety health and environmental regulations/legislation specific for the substance or mixture:

In the United States (EPA Regulations):

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

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

SARA 311/312 Hazards: none

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

15.2 Chemical safety assessment: No chemical safety assessment has been carried out for this substance/mixture by the supplier.



Glossary: ACGIH-American Conference of Governmental Industrial Hygienists; ANSI-American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS-Chemical Abstract Service; Chemtrec-Chemical Transportation Emergency Center (US); CHIP-Chemical Hazard Information and Packaging; DSL-Domestic Substances List; EC-Equivalent Concentration; EH40 (UK)-HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA-Emergency Planning and Community Right-To-Know Act; ESL-Effects screening levels; GHS-Globally Harmonized System of Classification and Labelling of Chemicals; HMIS-Hazardous Material Information Service; IATA-International Air Transport Association; IMDG-International Maritime Dangerous Goods Code; LC-Lethal Concentration; LD-Lethal Dose; LEL-Lower Explosion Level; NFPA-National Fire Protection Association; OEL-Occupational Exposure Limit; OSHA-Occupational Safety and Health Administration, US Dept. of Labor; PEL-Permissible Exposure Limit: SARA (Title III)-Superfund Amendments and Reauthorization Act: SARA 313-Superfund Amendments and Reauthorization Act, Section 313; SCBA-Self-Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ-Texas Commission on Environmental Quality; TLV-Threshold Limit Value; TSCA-Toxic Substances Control Act Public Law 94-469; TWA-Time Weighted Value; UEL-Upper Explosion Level; US DOT-US Department of Transportation; WHMIS-Workplace Hazardous Materials Information System.

Disclaimer: The information contained in this Safety Data Sheet (SDS) 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 SDS is prepared to comply with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as prescribed by the United States (US) Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH).

Classifications of the chemical in accordance with 29 CFR 1910.1200, signal word, hazard and precautionary statement(s), symbol(s) and other information are based on listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS and EC No 1907/2006 and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directives.



CLIENT: SMOOTH-ON INC. 5600 Lower Macungie Road Lower Macungie, PA 18062

Test Report No	o: TJ5491	Date: April 24, 2018				
SAMPLE ID:	The test samples are id	entified as "DRAGON SKIN 10"				
SAMPLING DETAIL:	Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.					
DATE OF RECEIPT:	Samples were received at QAI on April 03, 2018					
TESTING PERIOD:	April 11, 2018					
AUTHORIZATION:	Proposal 18SP031901	approved on March 29, 2018				
TEST PROCEDURE:	The submitted sample volution outlines in UL-94 (2006 Parts and Devices in Appendix 2006 Parts and Pa	was tested in accordance with the procedures), "Tests for Flammability of Plastic Materials for opliances" (Horizontal Burning Test, HB Section 7)				
TEST RESULTS:	Results can be found o tested.	n the following pages and apply only to the sample				
CLASSIFICATION:	The sample resulted in UL94.	a Classification of HB according to section 7.1.3 of				

Prepared By

L. Casay Aldont

L. Casey Holcomb Fire Testing Technician

Signed for and on behalf of QAI Laboratories, Inc.

Fire Lab Project Manager

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TEST RESULTS:

SAMPLE ID	Passed 25-mm Length	Reached 100-mm Length	Time ¹ (min:sec)	Linear Burn Rate ² (mm/min)
Dragon skin 1	No	No	00:00	0
Dragon skin 2	No	No	00:00	0
Dragon skin 3	No	No	00:00	0
AVERAGE	No	No	00:00	0

 1 – References the time to across from the 25-mm mark to the 75-mm mark 2 – References the Time $^1\,\text{per}$ 50-mm length burn

Additional notes: The sample measured 125mm x 13mm x 13mm. The minimum required thickness from the referenced standard is 3.0mm. Sample tested as submitted.

END OF REPORT