Section 1 - Identification

1.1 Product Identifier: Part A for: Smooth-Cast® 325, 326 and 327
1.2 General Use: Polyurethane Elastomer
1.3 Manufacturer: Smooth-On, Inc.,
5600 Lower Macungie Rd., Macungie, PA 18062
Phone (610) 252-5800, 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:
- H315 Skin corrosion/irritation – Category 2
- H317 Skin sensitization – Category 1
- H319 Eye irritation – Category 2A
- H332 Acute toxicity, inhalation – Category 4
- H334 Respiratory Sensitization – Category 1
- H335 Specific target organ toxicity – single exposure – Category 3 (respiratory)
- H351 Carcinogenicity – Category 2
- H373 Specific Target Organ Toxicity, repeated exposure Category 2 (respiratory)
- H401 Aquatic acute toxicity – Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram(s):
Signal word: Danger

Health Hazards:
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 May cause respiratory irritation
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

Environmental Hazards:
- H401 Toxic to aquatic life.

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.

Prevention Precautions:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.

Response Precautions:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P314 Get medical advice/attention if you feel unwell.
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

Storage Precautions:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal Precautions:
P501 Dispose of contents/container according to local, state and federal laws.

Hazards not otherwise classified (HNOC) or not covered by GHS – Lachrymator
This product contains a chemical known to be hazardous according to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). (See also Section 3 and 15)

Section 3 - Composition / Information on Ingredients

3.1 Substances
The following ingredients are hazardous according to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS  #</th>
<th>Concentration (%wt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4' Methylene bis(phenylisocyanate) (MDI)</td>
<td>101-68-8</td>
<td>25 – 40</td>
</tr>
<tr>
<td>Polymethylene polyphenyl isocyanates</td>
<td>9013-87-9</td>
<td>45 – 65</td>
</tr>
<tr>
<td>Butyl benzyl phthalate</td>
<td>85-68-7</td>
<td>5 – 15</td>
</tr>
</tbody>
</table>

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: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains or unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. No special environmental precautions required.

6.3 Methods and material for containment and cleaning up: Put on appropriate protective gear including NIOSH/MSHA approved self-contained breathing apparatus, rubber boots and heavy rubber gloves. 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.
Follow applicable OSHA regulations (29 CFR 1910.120) for disposal.

6.4 Reference to other sections: See Section 3 for list of Hazardous Ingredients; Sections 8 for Exposure Controls; and Section 13 for Disposal.

Section 7 - Handling and Storage

7.1 Precautions for safe handling: Use good general housekeeping procedures. Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices.

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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA PEL</th>
<th>CLV ppm</th>
<th>ACGIH TLV</th>
<th>TWA ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylene bis(phenylisocyanate) (MDI)</td>
<td>OSHA PEL</td>
<td>0.02 ppm, 0.2 mg/m³</td>
<td>ACGIH TLV</td>
<td>TWA value 0.005 ppm</td>
</tr>
<tr>
<td>Polymethylene polyphenyl isocyanates</td>
<td>OSHA PEL</td>
<td>0.02 ppm, 0.2 mg/m³</td>
<td>ACGIH TLV</td>
<td>TWA value 0.005 ppm</td>
</tr>
</tbody>
</table>
8.2 Exposure controls:

**Respiratory Protection:** Respiratory protection is not normally required when using this product with adequate local exhaust ventilation. Where risk assessment shows air-purifying respirators are appropriate, 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 appropriate filter cartridges as a backup to engineering controls.

**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 EN 166. 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.

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### Section 9 - Physical and Chemical Properties

**9.1 Information on basic physical and chemical properties:**

- Appearance: Amber liquid
- Odor/Threshold: Musty odor
- pH: N.A. (non-aqueous)
- Melting Point/Freezing Point: 37°F
- Low/High Boiling Point: >390°F
- Flash Point: >390°F
- Evaporation Rate: Not available
- Flammability: f.p. at or above 200°F
- UEL/LEL: Not available
- Vapor Pressure: 0.00016 mmHg (68 °F)
- Vapor Density (Air=1): >1
- Specific Gravity (H2O=1, at 4 °C): 1.2
- Water Solubility: Insoluble
- Partition coefficient: Not available
- Auto-ignition temperature: Not available
- Decomposition temperature: Not available
- Viscosity: 600 centipoise
- % Volatile: 0% (v/v), 0% (w/w)

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### 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.

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### Section 11 - Toxicological Information

- **11.1 Information on toxicological effects:** Information extrapolated based on individual component data. Assessment of irritating effects: irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.
Skin Corrosion/Irritation: Draize test (rabbit): irritating (based on MDI)
Serious Eye Damage/Irritation: Draize test (rabbit): irritating (based on MDI)

Respiratory/Skin Sensitization:
Buehler test (guinea pig): sensitizing
Mouse Local Lymph Node Assay (LLNA): sensitizing, can cause skin sensitization.
Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Germ Cell Mutagenicity: no data

Carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure. OECD Guideline 453 rat inhalation 0, 0.2, 1, 6 mg/m³ result: lung tumors.
IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (MDI and butyl benzyl phthalate).
NTP: No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
OSHA: No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: Repeated inhalation uptake of the substance did not cause damage to the reproductive organs. Assessment of teratogenicity showed that the substance did not cause malformations in animal studies, however toxicity to development was observed at high doses that were toxic to the parental animals.

Specific Target Organ Toxicity – Single Exposure: causes temporary irritation of the respiratory tract
Specific Target Organ Toxicity – Repeated Exposure: no data
Aspiration Hazard: no data

Acute Toxicity:
LD₅₀ oral (rat): > 6,150 mg/kg
LC₅₀ inhalation (rat): > 6.2 mg/l
LD₅₀ dermal (rabbit): > 28,900 mg/kg

Chronic Exposure: NOAEL: 0.6 mg/m³; LOAEL: 3 mg/m³
Potential Health Effects – Miscellaneous: no data

### Section 12 - Ecological Information

12.1 Toxicity:
LC₀ (96 h): > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)
EC₅₀ (24 h): > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
EC₀ (72 h): 1,640 mg/l (growth rate), Scenedesmus subspicatus, (OECD Guideline 201, static
LC₅₀ (96 h): 17 mg/l, Lepomis macrochirus
NOEC (96 h): 4.8 mg/l, Oncorhynchus mykiss
LC₅₀, flow through (96 h): 21 mg/l Pimephales promelas

12.2 Persistence and Degradability: Poorly biodegradable (0% BOD OECD Guideline 302 C). This product is unstable in water. The elimination data also refer to products of hydrolysis.

12.3 Bioaccumulative Potential: Significant accumulation in organisms is not to be expected.

12.4 Mobility in Soil: Adsorption to solid soil phase is not expected.

12.5 Results of PBT and vPvB assessment: no data

12.6 Other Adverse Effects: The substance will not evaporate into the atmosphere from the water surface.
Section 13 - Disposal Considerations

13.1 Waste treatment methods: Under Resource Conservation and Recovery Act (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 as defined in 40 CFR Part 261. 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

14.1 UN number: 3082
14.2 UN proper shipping name: Environmentally hazardous substance, liquid n.o.s. (Butyl Benzylic phthalate Mixture)
14.3 Transport hazard class(es): 9
14.4 Packing group: III
14.5 Environmental hazards: Marine Pollutant
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:

REACH: Regulation (EC) No 1907/2006 of The European Parliament and of The Council of December 2006 (including amendments and corrigenda as of 17 February 2016): This product is subject to regulation under REACH. The product contains the following ingredient(s) listed on either the Candidate List or Authorization List for Substances of Very High Concern (SVHC):

- butyl benzyl phthalate  85-68-7

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 311/312 Hazard(s): Acute health hazard, Chronic health hazard

SARA 313 Components:

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<tr>
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<td>50% - 75%</td>
</tr>
</tbody>
</table>
Safety Data Sheet

California Proposition 65: WARNING! This product contains a chemical which has been identified by the state of California to cause 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.

16 - Other Information

Revision: 6
Date Prepared: August 21, 2017

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 Limit; 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.