



SAFETY DATA SHEET

Section 1. Identification

Product Name: SB-6700 Part B, SB-6715 Part B, SB-6725 Part B, SB-6750 Part B

Synonyms: SurfacePRO Ultra Part B
SurfacePRO RTU Part B
SurfacePRO Premium Part B
SurfacePRO Classic Part B

Supplier's Details: SEK-Surebond Corporation
3925 Stern Avenue
St. Charles, IL 60174
(800) 932-3343
www.sek.us.com

Emergency Telephone Number: CHEMTREC (800) 424-9300 (United States Only)
Chemtrec (outside USA): (703) 527-3887

Section 2. Hazards Identification

GHS Classification:

Acute toxicity (Inhalation): Category 4
Skin sensitization: Category 1
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

GHS Label Elements:

Hazard Pictograms:



Signal Word: Warning

Hazard Statements:

May cause an allergic skin reaction.
Harmful if inhaled.
May cause respiratory irritation.

Precautionary Statements:

Prevention:

Avoid breathing dust, mist, gas, vapors or spray. Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

Call a doctor or emergency medical facility (i.e. 911) if you feel unwell.

If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse.

Storage:

Store in a well-ventilated place.

Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

Hazards not otherwise classified:

None known.

Section 3. Composition/Information on Ingredients

Substance/Mixtures

Mixture

Chemical Name:

NA

Other Means of Identification:

SB-6700 SurfacePRO Ultra Part B
SurfacePRO RTU Part B
SurfacePRO Premium Part B
SurfacePRO Classic Part B

CAS number/other identifiers:

CAS Number: Mixture

Hazardous Components

Chemical Name	Concentration	Additional Identification	Notes
Homopolymer of Hexamethylene Diisocyanate	60 - 80%	CAS-No.: 28182-81-2	
Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	10 - 30%	666723-27-9	
Hexamethylene-1,6-Diisocyanate	<0.5%	833-06-0	

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

Other Ingredients

Chemical Name	Concentration	Additional Identification	Notes
N,N-dimethylcyclohexylamine	0.1 - 1%	CAS-No.: 98-94-2	

This product contains an amine neutralizing agent which is bound in the matrix of this product as a salt. This amine salt is considered essentially unreactive at room temperature. Generation of amine vapors is expected when this product is processed (heated) during the drying/hardening of the coating.

Section 4. First Aid Measures

Description of Necessary First Aid Measures:

Inhalation:

Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

Eye Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Then remove contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention if irritation develops.

Skin Contact:

If direct skin contact with isocyanates occurs, immediately remove contaminated clothing and shoes. Wipe off the isocyanate product from the skin using dry towels or other similar absorbent fabric. If readily available, apply a polyglycol-based cleanser (e.g. Colorimetric Laboratories, Inc. (CLI) D-TAM™ Skin Cleanser) or corn oil. Wash with soap and warm water and pat dry. If a polyglycol-based cleanser is not available, wash with soap and warm water for 15 minutes. If available, use a wipe test pad to verify decontamination is complete (e.g. CLI SWYPE™). Get medical attention if irritation develops. Discard or wash contaminated clothing before reuse.

Ingestion:

Do NOT induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.

Notes to Physician:

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

Most Important Symptoms/Effects (both acute and delayed):

Acute: Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Delayed: Symptoms affecting the respiratory tract can also occur several hours after overexposure.

Section 5. Firefighting Measures

General Fire Hazards: Not applicable.

Extinguishing Media:

Suitable Extinguishing Media: Dry chemical, Carbon dioxide (CO₂), Foam, water spray for large fires.

Unsuitable Extinguishing Media: High volume water jet

Hazardous Thermal Decomposition:

By Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

Special hazards arising from the substance or mixture:

Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Advice for Firefighters:

Special firefighting procedures:

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Always wear proper PPE when cleaning up an isocyanate spill or when decontaminating surfaces, tools, or equipment using a neutralization solution. It may take two or more applications of the neutralization solution to decontaminate the surface. Residual surface contamination can be checked using a surface wipe method such as the CLI Swype™ pad.

Implement site emergency response plan. Evacuate non-emergency personnel. The magnitude of the evacuation depends upon the quantity released, site conditions, and the ambient temperature. Isolate the area and prevent access of unauthorized personnel. Notify management.
Call CHEMTREC at 1-800-424- 9300 for assistance and advice.

Environmental Precautions:

Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up:

Wear necessary personal protective equipment (PPE) as specified in the SDS or the site emergency response plan. Ventilate and remove ignition sources. Control the source of the leak. Contain the released material by damming, diking, retaining, or diverting into an appropriate containment area. Absorb or pump off as much of the spilled material as possible. When using absorbent, completely cover the spill area with suitable absorbent material (e.g., vermiculite, kitty litter, Oil-Dri®, etc...). Allow for the absorbent material to absorb the spilled liquid. Shovel the absorbent material into an approved metal container (i.e., 55-gallon salvage drum). Do not fill the container more than 2/3 full to allow for expansion, and do not tighten the lid on the container. Repeat application of absorbent material until all liquid has been removed from the surface. For spills involving a solid product, remove mechanically (sweep up, vacuum, shovel etc.) and collect and place into an approved metal container.

Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container. Residual surface contamination can be checked using a wipe test pad to verify decontamination is complete (e.g. CLI Surface Swype™). If the wipe test pad demonstrates that isocyanate remains on the surface (red color on pad), repeat applications of neutralization solution, with scrubbing, followed by absorbent until the surface is decontaminated (no color change on wipe pad). Apply lid loosely to metal waste container (do not tighten the lid because carbon dioxide gas and heat can be generated from the neutralization process). With the lid still loosely in place, move the container to an isolated, well-ventilated area to allow release of carbon dioxide. After 72 hours, seal the container, and properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, state and local regulations.

Additional Spill Procedures/Neutralization:

Products or product mixtures that have been shown to be effective neutralization solutions for decontaminating surfaces, tools, or equipment that have been in contact with an isocyanate include, but are not limited to:

Colorimetric Laboratories, Inc. (CLI): 1-847-803-3737

- Isocyanate Decontamination Solution

Spartan Chemical Company: 1-800-537-8990

- Spartan® ShineLine Emulsifier Plus (stripping solution)
- Spartan® SC-200 Heavy Duty Cleaner

ZEP Commercial Heavy Duty Floor Stripper

- A mixture of 90% water, 10% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10)
- A mixture of 75% water, 20% non-ionic surfactant, and 5% n-propanol
- A mixture of 80% water, 10% non-ionic surfactant, 5% isopropanol, 5% ammonium hydroxide (household ammonia)

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Section 7. Handling and Storage

Precautions for Safe Handling:

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

Conditions for Safe Storage, Including any Incompatibilities:

Store separate from food products.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Storage Temperature:

Minimum: 0 °C (32 °F)

Maximum: 30 °C (86 °F)

Storage stability:

Shelf life, use within: 6 Months @ 25 °C (77 °F) after receipt of material by customer

Substances to Avoid:

Water, Amines, Strong bases, Alcohols, Copper alloys

Section 8. Exposure Controls/Personal Protection

Control Parameters:

Occupational Exposure Limits:

Chemical Name	Exposure Limit Values	Source
<i>Homopolymer of Hexamethylene Diisocyanate (28182-81-2)</i>	Time weighted average 0.5 mg/m ³	
	Short Term Exposure Limit (STEL): 1.0 mg/m ³ (15-min)	

Chemical Name	Exposure Limit Values	Source
<i>Hexamethylene-1,6-Diisocyanate (822-06-0)</i>	Time weighted average 0.005 ppm	US. ACGIH Threshold Limit Values

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Exposure Controls:

Appropriate Engineering Controls:

Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent emissions into the workplace. If oven off-gases are not vented properly (i.e. they are released into the work area), it is possible to be exposed to airborne monomeric HDI.

General Information:

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

Eye/Face Protection:

When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle, or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

Skin Protection:

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Gloves, long sleeved shirts and pants

Hand Protection:

Ensure gloves remain in good condition during use and replace if any deterioration is observed. Gloves should be worn., Nitrile rubber gloves., Butyl rubber gloves., Neoprene gloves

Other:

No data available.

Respiratory Protection:

A respirator that is recommended or approved for use in isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied-air respirator (either positive pressure or continuous flow-type) is recommended. Before an air-purifying respirator can be used, air monitoring must be performed to measure airborne concentrations of HDI monomer and HDI polyisocyanate. Specific conditions under which air-purifying respirators can be used are outlined in the following sections. Observe OSHA regulations for respirator use (29 CFR 1910.134). **SPRAY APPLICATION:** A. Good industrial hygiene practice dictates that when isocyanate-based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of coatings containing this product the use of a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: -the airborne isocyanate concentrations are not known; or -the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or -the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or -operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -The airborne isocyanate monomer concentrations are known to be below 0.05 ppm averaged over eight (8) hours (10 times 8 hour TWA exposure limit); and -the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits). In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup. **NON-SPRAY OPERATIONS:** A. During non-spray operations such as mixing, batch-making, brush or roller application, etc., at elevated temperatures (for example, heating of material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system will be applied in a non-spray manner, a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: - the airborne isocyanate concentrations are not known; or - the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or - the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or - operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -the airborne concentrations of the isocyanate monomer are below 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); and - the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m³ averaged over eight (8) hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and - a NIOSH-certified End of Service Life Indicator or a

change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, pre-filters should be changed whenever breathing resistance increases due to particulate buildup.

Medical Surveillance:

All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted

Additional Protective Measures:

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

Hygiene Measures:

Observe good industrial hygiene practices.

Environmental Controls:

No data available.

Section 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties:

Appearance:

Physical State:	Liquid
Form:	Liquid
Color:	Light Yellow

Odor:	Slight
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Odor Threshold:	No Data Available
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pH:	No Data Available
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Freezing Point:	No Data Available
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Boiling Point:	Decomposition
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Flash Point:	ca. 185 °C (365 °F) (DIN EN 22719)
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Evaporation Rate:	No Data Available
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Flammability (solid, gas):	NA
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Flammability – Upper (%)-:	NA
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Flammability – Lower (%):-	NA
Vapor Pressure:	HDI Polyisocyanate: 5.2 X 10 ⁻⁹ @ 68 F (20 C) mmHg
Vapor Density (air=1):	No data available
Specific Gravity:	Approximately 1.15 @ 20 °C (68 °F)
Solubility:	
Solubility in Water:	Insoluble - Reacts slowly with water to liberate CO ₂ gas
Solubility (other):	No data available
Partition coefficient (n-octanol/water):	No data available
Auto-ignition Temperature:	ca. 445 °C (833 °F) (DIN 51794)
Decomposition Temperature:	ca. 181 °C (357.8 °F)
Dynamic Viscosity:	Approximately 800 mPa.s @ 20 °C (68 °F)
Kinematic Viscosity:	No data available
Explosive Properties:	No data available
Oxidizing Properties:	Not classified

Section 10. Stability and Reactivity

Reactivity:	Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization, Moisture (water and high humidity) or high heat (temperatures greater than 350 F (177C)) can cause pressure build-up with possible explosive rupture.
Chemical Stability:	Stable under normal conditions of use and storage.
Possibility of Hazardous Reactions:	None known
Conditions to Avoid:	Heat, flames and sparks. Protect from freezing.
Incompatible Materials:	Water, Amines, Strong bases, Alcohols, Copper alloys
Hazardous Decomposition Products:	By Fire and High Heat: Carbon dioxide (CO ₂), carbon monoxide (CO), oxides of nitrogen (NO _x), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

Section 11. Toxicological Information

Information on Likely Routes of Exposure:

Inhalation:	May be harmful if inhaled.
Ingestion:	May be harmful if swallowed.
Skin Contact:	May cause skin irritation.
Eye Contact:	May cause eye irritation.

Information on Toxicological Effects:

Health Affects and Symptoms:

Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Acute Toxicity:

Oral LD50: $\geq 5,000$ mg/kg (rat, female) (OECD Test Guideline 423)
Toxicological studies at the product

Dermal LD50: $> 2,000$ mg/kg (rat, male/female) (OECD Test Guideline 402)
Studies of a comparable product

LD50: 2,000 mg/kg (rabbit, male/female) Studies of a comparable product.

Inhalation LC50: 0.39 mg/l, 4 h, dust/mist (rat, female) (OECD Test Guideline 403)
Toxicological studies of a comparable product. The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Eye Contact May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

Skin Irritation Rabbit, OECD Test Guideline 404, slight irritant

Toxicological studies at the product

Eye Irritation Rabbit OECD Test Guideline 405, slight irritant
Toxicological studies at the product

Repeated Dose Toxicity

90 d, Inhalative: NOAEL: 3,3, (rat, male/female, 6 hours a day, 5 days a week) Toxicological studies of a comparable product. Evidence of damage to organs other than the organs of respiration was not found.

Skin Sensitization

Skin sensitization (local lymph node assay (LLNA)):: Causes sensitisation. (Mouse, OECD Test Guideline 429). Toxicological studies at the product.

Serious Eye Damage/Eye Irritation

Rabbit, OECD Test Guideline 405, slight irritant
Toxicological studies at the product

Respiratory Sensitization

No pulmonary sensitization observed in animal tests. No pulmonary sensitization potential was observed in guinea pigs after either intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate.

Mutagenicity:

In Vitro

Product: Salmonella/microsome test (Ames test): negative (Salmonella typhimurium, Metabolic Activation: with/without)

In Vivo

Product: Micronucleus test: negative (Mouse, male/female, Inhalative) negative

Carcinogenicity

Rat, male/female, Inhalative, 2 yrs, 6 hours/day, 5 days/week Did not show carcinogenic effects in animal experiments

No carcinogenic substances as defined by IARC, NTP and/or OSHA

Reproductive Toxicity

Product: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test, Inhalative, 6 hours/day 7 days/week, (rat, male/female) NOAEL (F2): 0.3 ppm Fertility and developmental toxicity tests did not reveal any effect on reproduction.

Specific Target Organ Toxicity – Single Exposure

Product: Not classified.

Specific Target Organ Toxicity – Repeated Exposure

Product: Not classified.

Neurological Effects

Rats exposed by inhalation, 6 hours/day, for approximately 3 weeks, to concentrations as high as 0.3 ppm showed no neurobehavioral effects or damage to nerve tissues.

Developmental Toxicity/Teratogenicity

Rat, female, Inhalative, 6 hours/day (Exposure duration: day 0 - 19 of gestation), NOAEL (teratogenicity): 0.3 ppm, NOAEL (maternal): 0.005 ppm Did not show teratogenic effects in animal experiments.

Other Adverse Effects

No data available.

Section 12. Ecological Information

Ecological Data for: SB-6700 Part B

Data on the product is not available.

Please find the data available for the components.

Ecological Data for Homopolymer of Hexamethylene Diisocyanate

Toxicity:

Acute Toxicity:

Fish

LC50: > 100 mg/l (Danio rerio (zebra fish), 96 h)

Aquatic Invertebrates

EC50: > 100 mg/l (Daphnia magna (Water flea), 48 h)

Aquatic Plants

ErC50: 199 mg/l, (scenedesmus subspicatus, 72 h)

Microorganisms

EC50: > 10,000 mg/l, (activated sludge, 3 h)

Additional Ecotoxicological Remarks

Data is based on a similar product, including residual monomer.

Chronic Toxicity:

Fish

LC50: > 100 mg/l (Danio rerio (zebra fish), 96 h)

Persistence and Degradability:

Biodegradation

Aerobic, 2 %, Exposure time: 28 d, i.e. not readily degradable Ecotoxicological studies of the product.

Aerobic, 0 %, Exposure time: 28 d, i.e. not inherently degradable Ecotoxicological studies of the product.

Biological Oxygen Demand

No data available.

Chemical Oxygen Demand

No data available.

BOD/COD Ratio

No data available.

Bioaccumulation

706.2 BCF - The substance hydrolyzes rapidly in water. An accumulation in aquatic organisms is not to be expected

10.11 BCF - An accumulation in aquatic organisms is not to be expected. Studies of hydrolysis products.

Ecological Data for Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate

Toxicity:

Acute Toxicity:

Fish

LC50: 35.2 mg/l (Danio rerio (zebra fish), 96 h)
Ecotoxicological reports on a comparable product

Aquatic Invertebrates

EC50: > 100 mg/l (Daphnia magna (Water flea), 48 h)
Ecotoxicological reports on a comparable product

Aquatic Plants

IC50: 72 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)
Ecotoxicological reports on a comparable product

Microorganisms

EC50: > 10,000 mg/l, (activated sludge)
Ecotoxicological reports on a comparable product

Additional Ecotoxicological Remarks

Data is based on a similar product, including residual monomer.

Chronic Toxicity:

Fish

LC50: 35.2 mg/l (Danio rerio (zebra fish), 96 h)
Eco toxicological reports on a comparable product

Persistence and Degradability:

Biodegradation

0 %, i.e. not readily degradable
Eco toxicological reports on a comparable product

Biological Oxygen Demand

No data available.

Chemical Oxygen Demand

No data available.

BOD/COD Ratio

No data available.

Bioaccumulation

No data available.

Ecological Data for Hexamethylene-1, 6-Diisocyanate

Toxicity:

Acute Toxicity:

Fish

LC0: >= 82.8 mg/l (Danio rerio (zebra fish), 96 h)

Aquatic Invertebrates

EC0: >= 89.1 mg/l (Daphnia magna (Water flea), 48 h)

Aquatic Plants

ErC50: > 77.4 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Toxicity to Microorganisms

EC50: 842 mg/l, (activated sludge, 3 h)

Chronic Toxicity:

Fish

LC0: >= 82.8 mg/l (Danio rerio (zebra fish), 96 h)

Persistence and Degradability:

Biodegradation

Aerobic, 42 %, Exposure time: 28 d, i.e. not readily degradable

Biological Oxygen Demand

No data available.

Chemical Oxygen Demand

No data available.

BOD/COD Ratio

No data available.

Bioaccumulation

Value calculated, 57.6 BCF. An accumulation in aquatic organisms is not to be expected.

Section 13. Disposal Considerations

Waste Treatment Methods:

General Information: No data available.

Disposal Methods: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

Empty Container Precautions: Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

Section 14. Transport Information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and description. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Land transport (DOT)

Proper Shipping Name: Other regulated substances, liquid, n.o.s. (contains Hexamethylene-1,6-Diisocyanate)
Hazard Class or Division: 9
UN/NA Number: NA3082
Packaging Group: III
Hazard Label(s): CLASS 9

RSPA/DOT Regulated Components:

Hexamethylene-1,6-Diisocyanate

Reportable Quantity:
9074 kg (20005 lb)

IMDG-International Maritime Dangerous Goods Code:

Class not regulated.

IATA:

Class not regulated.

Section 15. Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: Controlled

SARA 311/312 Hazard Classifications:

Refer to hazard classification information in Section 2.

US EPCRA (SARA Title III) Section 313 – Toxic Chemical List:

None

US EPA CERCLA Hazardous Substances (40 CFR 302) Components:

None

US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:

None

US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:

None

US EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<1 ppm	Hexachlorobenzene	118-74-1

State Right-To-Know Information:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Homopolymer of Hexamethylene Diisocyanate	28182-81-2
15 - 25%	Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	666723-27-9
0.1 - 1%	N,N-dimethylcyclohexylamine	98-94-2
<0.5%	Hexamethylene-1,6-Diisocyanate	822-06-0

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	N,N-dimethylcyclohexylamine	98-94-2
<0.5%	Hexamethylene-1,6-Diisocyanate	822-06-0

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<1 ppm	Hexachlorobenzene	118-74-1

CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Components of this product are reported in the following inventories:

TCSA (US toxic Substances Control Act

No substances are subject to TSCA 12(b) export notification requirements.

Section 16. Other Information

Revision Information: Not relevant.

**Key Literature References
and Sources for Data:** No data available.

Training Information: No data available.

Date of Issue/Date of Revision: 12/21/19

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