

**TO WHOM IT MAY CONCERN**

**Bona Commercial System Item - Information regarding Safety Data  
Sheets (SDSs)**

This letter is to inform you that this item is a 2-part component. Thus, this document contains two Safety Data Sheets, one for the base color and one for the hardener.

# SAFETY DATA SHEET



Bona Commercial System Concrete Floor Clear Coat

## Section 1. Identification

**GHS product identifier** : Bona Commercial System Concrete Floor Clear Coat  
**Product code** : T600 0-8  
**Other means of identification** : Not available.  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

**Supplier's details** : BonaKemi USA, Inc. (dba Bona US)  
24 Inverness Place E. Suite #100  
Englewood, CO 80112  
(303) 371-1411

**Emergency telephone number (with hours of operation)** : 24 Hour Emergency Number: call CHEMTREC: US - 1-800-424-9300, International - 1-703-527-3887

## Section 2. Hazards identification

**OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

**Classification of the substance or mixture** : Not classified.

### GHS label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Not available.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

## Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.   |
| <b>Inhalation</b>   | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.   |
| <b>Skin contact</b> | : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  |
| <b>Ingestion</b>    | : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : No known significant effects or critical hazards. |
| <b>Inhalation</b>   | : No known significant effects or critical hazards. |
| <b>Skin contact</b> | : No known significant effects or critical hazards. |
| <b>Ingestion</b>    | : No known significant effects or critical hazards. |

#### Over-exposure signs/symptoms

- |                     |                     |
|---------------------|---------------------|
| <b>Eye contact</b>  | : No specific data. |
| <b>Inhalation</b>   | : No specific data. |
| <b>Skin contact</b> | : No specific data. |
| <b>Ingestion</b>    | : No specific data. |

### Indication of immediate medical attention and special treatment needed, if necessary

- |                                   |   |
|-----------------------------------|---|
| <b>Notes to physician</b>         | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| <b>Specific treatments</b>        | : No specific treatment.  |
| <b>Protection of first-aiders</b> | : No action shall be taken involving any personal risk or without suitable training.  |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- |                                       |   |
|---------------------------------------|---|
| <b>Suitable extinguishing media</b>   | : Use an extinguishing agent suitable for the surrounding fire. |
| <b>Unsuitable extinguishing media</b> | : None known.   |

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- |   |  |
|---|--|
| <b>Hazardous thermal decomposition products</b> | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
|---|--|

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. > 8 hours (breakthrough time): nitrile rubber

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Personal protective equipment (Pictograms)** :



## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : White.
- Odor** : Not available.
- Odor threshold** : Not applicable.
- pH** : 8
- Melting point** : 0°C (32°F)
- Boiling point** : 100°C (212°F)

## Section 9. Physical and chemical properties

Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: Not applicable.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1,04
Solubility	: Soluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

## Section 11. Toxicological information

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Not available.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-	-	-
<b>Packing group</b>	-	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.	No.



## Section 14. Transport information

Additional information	-	-	-	-	-	-
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**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** (2-methoxymethylethoxy)propanol  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are listed or exempted.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Not applicable.

#### Composition/information on ingredients

No products were found.

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

## Section 15. Regulatory information

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

<b>Australia</b>	: Not determined.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: Not determined.
<b>Europe</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>Malaysia</b>	: Not determined
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Turkey</b>	: Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	0
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



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## Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

Classification	Justification
Not classified.	

### History

**Date of printing** : 2021-08-17

**Date of issue/Date of revision** : 2021-08-17

**Date of previous issue** : No previous validation

**Version** : 1

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SAFETY DATA SHEET

**Bona®**

Bona Commercial System Universal Hardener

## Section 1. Identification

**GHS product identifier** : Bona Commercial System Universal Hardener  
**Product code** : H390 -0  
**Other means of identification** : Not available.  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Professional application of coatings and inks by brush or roller	
Uses advised against	Reason
Consumer application of coatings	Safe use cannot be demonstrated.

**Supplier's details** : BonaKemi USA, Inc. (dba Bona US)  
24 Inverness Place E. Suite #100  
Englewood, CO 80112  
(303) 371-1411

**Emergency telephone number (with hours of operation)** : 24 Hour Emergency Number: call CHEMTREC: US - 1-800-424-9300, International - 1-703-527-3887

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Harmful if inhaled.  
Causes serious eye damage.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause respiratory irritation.

### Precautionary statements

## Section 2. Hazards identification

- Prevention** : Wear protective gloves: > 8 hours (breakthrough time): nitrile rubber. Wear eye or face protection. Wear respiratory protection. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
- Response** : IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	%	CAS number
Hexane, 1,6-diisocyanato-, homopolymer	≥90	28182-81-2
Poly(oxy-1,2-ethanediyl), α-tridecyl-ω-hydroxy-, phosphate	≤3	9046-01-9
ethyldiisopropylamine	≤3	7087-68-5
Phosphoric acid, butyl ester	≤3	12788-93-1
Hexamethylene diisocyanate	<1	822-06-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

## Section 4. First aid measures

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.



## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters


#### Occupational exposure limits

Ingredient name	Exposure limits
Hexane, 1,6-diisocyanato-, homopolymer  Poly(oxy-1,2-ethanediyl), $\alpha$ -tridecyl- $\omega$ -hydroxy-, phosphate ethyldiisopropylamine Phosphoric acid, butyl ester Hexamethylene diisocyanate	<b>ACGIH TLV (United States).</b> TWA: 0,034 mg/m <sup>3</sup> 8 hours. TWA: 0,005 ppm 8 hours. None. None. None. <b>ACGIH TLV (United States, 3/2018).</b> TWA: 0,005 ppm 8 hours. TWA: 0,03 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2016).</b> TWA: 0,005 ppm 10 hours. TWA: 0,035 mg/m <sup>3</sup> 10 hours. CEIL: 0,02 ppm 10 minutes. CEIL: 0,14 mg/m <sup>3</sup> 10 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> <b>Absorbed through skin.</b> TWA: 5 mg/m <sup>3</sup> , (as CN) 8 hours. <b>OSHA PEL (United States, 5/2018).</b> <b>Absorbed through skin.</b> TWA: 5 mg/m <sup>3</sup> , (as CN) 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.



## Section 8. Exposure controls/personal protection

<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
<b>Individual protection measures</b>	
<b>Hygiene measures</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
<b>Skin protection</b>	
<b>Hand protection</b>	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber
<b>Body protection</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
<b>Personal protective equipment (Pictograms)</b>	: 

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Not available.
<b>Odor</b>	: Not available.
<b>Odor threshold</b>	: Not applicable.
<b>pH</b>	: Not applicable.
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Closed cup: >120°C (>248°F)
<b>Evaporation rate</b>	: Not available.

## Section 9. Physical and chemical properties

<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: Not applicable.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1,09
<b>Solubility</b>	: Very slightly soluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not applicable.
<b>Viscosity</b>	: Not available.
<b>Flow time (ISO 2431)</b>	: Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexane, 1,6-diisocyanato-, homopolymer	LC50 Inhalation Dusts and mists	Rat	18500 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
Hexamethylene diisocyanate	LD50 Oral	Rat - Female	5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	124 mg/m <sup>3</sup>	4 hours

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexane, 1,6-diisocyanato-, homopolymer	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Hexane, 1,6-diisocyanato-, homopolymer	skin	Mouse	Sensitizing
	skin	Guinea pig	Sensitizing

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Hexane, 1,6-diisocyanato-, homopolymer	Category 3	Not applicable.	Respiratory tract irritation
ethyldiisopropylamine	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

## Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	32051,28 mg/kg
Inhalation (vapors)	192,31 mg/l
Inhalation (dusts and mists)	4,91 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Hexane, 1,6-diisocyanato-, homopolymer	Acute EC50 >1000 mg/l	Algae	72 hours
	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
Hexamethylene diisocyanate	Acute EC50 77,4 mg/l	Algae	72 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexane, 1,6-diisocyanato-, homopolymer	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hexane, 1,6-diisocyanato-, homopolymer	5,54	367,7	low
Hexamethylene diisocyanate	0,02	57,63	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-

## Section 14. Transport information

Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	<b>Reportable quantity</b> 26595,7 lbs / 12074,5 kg [2926,4 gal / 11077,5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.					

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**TSCA 8(c) calls for record of SAR:** hexamethylene-di-isocyanate  
**United States inventory (TSCA 8b):** All components are listed or exempted.  
**Clean Water Act (CWA) 307:** hexamethylene-di-isocyanate

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

## Section 15. Regulatory information

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Immediate (acute) health hazard

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Hexane, 1,6-diisocyanato-, homopolymer	≥90	No.	No.	No.	Yes.	No.
Poly(oxy-1,2-ethanediyl), α-tridecyl-ω-hydroxy-, phosphate ethyldiisopropylamine	≤3	No.	No.	No.	Yes.	No.
Phosphoric acid, butyl ester	≤3	Yes.	No.	No.	Yes.	No.
Hexamethylene diisocyanate	<1	No.	No.	No.	Yes.	No.

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: BUTYL ACID PHOSPHATE; ACID BUTYL PHOSPHATE

**Pennsylvania** : None of the components are listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

**Australia** : All components are listed or exempted.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

## Section 15. Regulatory information

Europe	: All components are listed or exempted.
Japan	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
Malaysia	: Not determined
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Turkey	: Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	0
Flammability	0
Physical hazards	0

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### National Fire Protection Association (U.S.A.)



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### Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method

### History

Date of printing : 2021-08-17



## Section 16. Other information

**Date of issue/Date of revision** : 2021-08-17

**Date of previous issue** : No previous validation

**Version** : 1

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

**References** : Not available.

Indicates information that has changed from previously issued version.

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