

## 468 Low VOC Urethane Topcoat - Clear Part A

Printed: 07/20/2021

Revision: 07/19/2021

## 1. Product and Company Identification

**Product Code:** 468-CLEAR  
**Product Name:** 468 Low VOC Urethane Topcoat - Clear Part A  
**Company Name:** Key Resin / Flowcrete  
 4050 Clough Woods Dr.  
 Batavia, OH 45103  
**Phone Number:** +1 (513)943-4225  
**Emergency Contact:** Chemtrec (USA) (800)424-9300  
 Chemtrec (International) +1 (703)527-3887  
**Intended Use:** Industrial Maintenance Coatings

## 2. Hazards Identification

**Acute Toxicity: Inhalation, Category 4**  
**Respiratory Sensitization, Category 1**  
**Skin Sensitization, Category 1**  
**Specific Target Organ Toxicity (single exposure), Category 3**  
**Specific Target Organ Toxicity (repeated exposure), Category 2**



Warning



Danger

**GHS Hazard Phrases:** H317 - May cause an allergic skin reaction.  
 H332 - Harmful if inhaled.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation.  
 H373 - May cause damage to lungs through prolonged or repeated exposure.

**GHS Precaution Phrases:** P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
 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.  
 P285 - In case of inadequate ventilation wear respiratory protection.

**GHS Response Phrases:** P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention. P363 - Wash contaminated clothing before reuse.  
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
 P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313 - If eye irritation persists, get medical advice/attention.  
 P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P315 - Get immediate medical advice/attention.

**GHS Storage and Disposal Phrases:** P405 - Store locked up.  
 P501 - Dispose of contents/container to local, state, and federal authority requirements.

**OSHA Regulatory Status:** This material is classified as hazardous under OSHA regulations.

## 468 Low VOC Urethane Topcoat - Clear Part A

Printed: 07/20/2021  
Revision: 07/19/2021

<b>Potential Health Effects (Acute and Chronic):</b>	May cause slight skin irritation or skin sensitization. May be slightly irritating to eyes and respiratory system.
<b>Inhalation:</b>	May cause respiratory irritation. May cause allergic respiratory reaction.
<b>Skin Contact:</b>	May cause skin irritation. May cause allergic skin reaction.
<b>Eye Contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Medical Conditions Generally Aggravated By Exposure:</b>	Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies.

### 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration	
28182-81-2	Poly(hexamethylene diisocyanate)	>=99 %	
822-06-0	Hexamethylene-1,6-diisocyanate	0.10 - 1.0 %	

### 4. First Aid Measures

<b>Emergency and First Aid Procedures:</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use first aid treatment according to the nature of the injury.
<b>In Case of Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If experiencing respiratory symptoms: Get medical attention immediately.
<b>In Case of Skin Contact:</b>	In case of contact, immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>In Case of Eye Contact:</b>	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
<b>In Case of Ingestion:</b>	Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.
<b>Signs and Symptoms Of Exposure:</b>	Mild irritation effect. May cause allergic skin reaction. If material is heated, sprayed, vapors from this material can produce asthmatic sensitization to the respiratory system.
<b>Note to Physician:</b>	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.

## 5. Fire Fighting Measures

<b>Flash Pt:</b>	> 300.00 F (148.9 C) Method Used: Closed Cup
<b>Explosive Limits:</b>	LEL: NE UEL: NE
<b>Autoignition Pt:</b>	No data.
<b>Suitable Extinguishing Media:</b>	Dry extinguishing media, foam.
<b>Unsuitable Extinguishing Media:</b>	Reacts with water, with formation of carbon dioxide.
<b>Fire Fighting Instructions:</b>	Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
<b>Flammable Properties and Hazards:</b>	Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

## 6. Accidental Release Measures

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Where splashing is possible, full chemically resistant protective clothing, and boots are required.
<b>Environmental Precautions:</b>	Prevent entry into waterways, sewers, basements or confined areas.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate the area.

## 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Provide adequate ventilation. Do not breathe vapor. Do not get in eyes, on skin or on clothing.
<b>Precautions To Be Taken in Storing:</b>	Store away from incompatible material. Store in cool/well-ventilated place.
<b>Other Precautions:</b>	Wash thoroughly after handling.

## 8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
28182-81-2	Poly(hexamethylene diisocyanate)	No data.	No data.	No data.
822-06-0	Hexamethylene-1,6-diisocyanate	No data.	TLV: 0.005 ppm	No data.

<b>Respiratory Equipment (Specify Type):</b>	Respiratory protection in case of vapor/aerosol release. Combination filter for gases/vapors of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2). 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.
<b>Eye Protection:</b>	Safety glasses, or goggles.
<b>Protective Gloves:</b>	Nitrile rubber and Neoprene are recommended.
<b>Other Protective Clothing:</b>	Where splashing is possible, full chemically resistant protective clothing, safety glasses or face shield and boots are required.
<b>Engineering Controls (Ventilation etc.):</b>	Good general ventilation should be sufficient to control airborne levels. Safety shower and eye bath.
<b>Work/Hygienic/Maintenance Practices:</b>	Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.
<b>Environmental Exposure Controls:</b>	Avoid runoff into storm sewers and ditches which lead to waterways. May be hazardous to the environment if released in large quantities.

## 9. Physical and Chemical Properties

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid
<b>Appearance and Odor:</b>	Odor: Mild. Appearance: Clear.
<b>Melting Point:</b>	NE
<b>Boiling Point:</b>	NE
<b>Decomposition Temperature:</b>	NE
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	> 300.00 F (148.9 C) Method Used: Closed Cup
<b>Explosive Limits:</b>	LEL: NE UEL: NE
<b>Specific Gravity (Water = 1):</b>	~ 1.17
<b>Density:</b>	~ 9.76 LB/GL
<b>Vapor Pressure (vs. Air or mm Hg):</b>	NE
<b>Vapor Density (vs. Air = 1):</b>	NE
<b>Evaporation Rate:</b>	NE
<b>Solubility in Water:</b>	NP
<b>Saturated Vapor Concentration:</b>	NE
<b>Percent Volatile:</b>	N.A.
<b>VOC / Volume:</b>	NP

## 10. Stability and Reactivity

<b>Reactivity:</b>	Reacts with alcohols, amines. Reacts with water, with formation of carbon dioxide.
<b>Stability:</b>	Unstable [ ] Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	Extreme temperatures.
<b>Incompatibility - Materials To Avoid:</b>	Reacts with alcohols, amines. Reacts with water, with formation of carbon dioxide.
<b>Hazardous Decomposition Or Byproducts:</b>	Carbon monoxide, Oxides of nitrogen, Traces of hydrogen cyanide, Isocyanate vapors
<b>Possibility of Hazardous Polymerization:</b>	Will occur [ ] Will not occur [ X ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	Extreme temperatures. Will not undergo hazardous polymerization in normal storage conditions.

## 11. Toxicological Information

<b>Toxicological Information:</b>	May cause sensitization by inhalation. May cause sensitization by skin contact.
<b>Irritation or Corrosion:</b>	May cause slight skin irritation or skin sensitization. May be slightly irritating to eyes and respiratory system.
<b>Symptoms related to Toxicological Characteristics:</b>	May cause respiratory sensitization. May cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.
<b>Chronic Toxicological Effects:</b>	Respiratory or skin sensitization.

## 12. Ecological Information

<b>General Ecological Information:</b>	Avoid release to the environment.
<b>Results of PBT and vPvB assessment:</b>	No data available.
<b>Persistence and Degradability:</b>	Not readily biodegradable.
<b>Bioaccumulative Potential:</b>	No data available.
<b>Mobility in Soil:</b>	not reported, unknown.

## 13. Disposal Considerations

<b>Waste Disposal Method:</b>	Incinerate or dispose of unused material, residues and containers in a licensed facility in accordance with all applicable local, state and federal regulations. Do not discharge substance/product into sewage system.
-------------------------------	---

## 14. Transport Information

### LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** Not Regulated.

**DOT Hazard Class:**

**UN/NA Number:**

### MARINE TRANSPORT (IMDG/IMO):

**IMDG/IMO Shipping Name:** Not Regulated.

**UN Number:**

**Hazard Class:**

**Packing Group:**

**IMDG MFAG Number:**

**IMDG EMS Page:**

No

### AIR TRANSPORT (ICAO/IATA):

**ICAO/IATA Shipping Name:** Not Regulated.

## 15. Regulatory Information

### EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
28182-81-2	Poly(hexamethylene diisocyanate)	No	No	No
822-06-0	Hexamethylene-1,6-diisocyanate	No	Yes 100 LB	Yes-Cat. N120,

**This material meets the EPA**  Yes  No Acute (immediate) Health Hazard  
**'Hazard Categories' defined**  Yes  No Chronic (delayed) Health Hazard  
**for SARA Title III Sections**  Yes  No Fire Hazard  
**311/312 as indicated:**  Yes  No Sudden Release of Pressure Hazard  
 Yes  No Reactive Hazard

## 16. Other Information

Revision Date: 07/19/2021

Hazard Rating System:

HEALTH	2
FLAMMABILITY	1
PHYSICAL	0
PPE	X

HMIS:

**Additional Information About This Product:** CA=CIRCA NA=NOT AVAILABLE NE=NOT ESTABLISHED NR=NOT REGULATED  
 NP= NOT APPLICABLE PR=PROPRIETARY TS=TRADE SECRET ?=UNKNOWN.

**Company Policy or Disclaimer:**

The information contained in this MSDS is taken from sources believed to be accurate as of the date hereof; however the Key Resin Company makes no expressed or implied warranty in respect to the accuracy of the information or the suitability of the recommendations, and assumes no liabilities to any user thereof.