

420 Ultra High Solids Urethane Topcoat Hardener Part-B

Printed: 07/06/2021

Revision: 07/06/2021

Supersedes Revision: 05/19/2016

1. Product and Company Identification

Product Code: 420-RCB
Product Name: 420 Ultra High Solids Urethane Topcoat Hardener Part-B
Company Name: Key Resin / Flowcrete **Phone Number:**
 4050 Clough Woods Dr. +1 (513)943-4225
 Batavia, OH 45103
Emergency Contact: Chemtrec (USA) (800)424-9300
 Chemtrec (International) +1 (703)527-3887
Intended Use: Industrial Maintenance Coatings

2. Hazards Identification

Skin Sensitization, Category 1

Serious Eye Damage/Eye Irritation, Category 2A

Respiratory Sensitization, Category 1

Acute Toxicity: Inhalation, Category 4

Specific Target Organ Toxicity (single exposure), Category 3



Danger



Warning

GHS Hazard Phrases:

H320 - Causes eye irritation.

H335 - May cause respiratory irritation.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 - May cause an allergic skin reaction.

H303 - May be harmful if swallowed.

GHS Precaution Phrases:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P264 - Wash hands thoroughly after handling.

P285 - In case of inadequate ventilation wear respiratory protection.

P271 - Use only outdoors or in a well-ventilated area.

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.

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.

P304+341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. P314 - Get medical attention/advice if you feel unwell.

P301 - IF SWALLOWED: P331 - Do NOT induce vomiting. P330 - Rinse mouth. P310 - Immediately call a POISON CENTER or doctor/physician.

GHS Storage and Disposal Phrases:

P501 - Dispose of contents/container to local, state, and federal authority requirements.

P405 - Store locked up.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

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Potential Health Effects**(Acute and Chronic):**

Inhalation: May cause respiratory tract irritation. May cause sensitization by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Contact: Causes skin irritation. May cause sensitization by skin contact.

Eye Contact: Causes eye irritation.

Ingestion: May be harmful if swallowed.

Medical Conditions Generally Aggravated By Exposure: Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies.

Aggravated By Exposure:

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration	
28182-81-2	Poly(hexamethylene diisocyanate)	>99 %	

4. First Aid Measures

Emergency and First Aid Procedures: Use first aid treatment according to the nature of the injury. Keep victim under observation. Get immediate medical advice/attention.

In Case of Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If experiencing respiratory symptoms: Get medical advice/attention.

In Case of Skin Contact: 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.

In Case of Eye Contact: 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.

In Case of Ingestion: If swallowed, wash out mouth with water provided person is conscious. Do not induce vomiting. Do not give anything to drink. Get medical attention immediately.

Signs and Symptoms Of Exposure: Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing.

5. Fire Fighting Measures

Flash Pt: ~ 336.00 F (168.9 C) Method Used: Closed Cup

Explosive Limits: LEL: NE UEL: NE

Autoignition Pt: ~ 896.00 F (480.0 C)

Suitable Extinguishing Media: Dry chemical or CO2. Foam.

Unsuitable Extinguishing Media: Water spray. Reacts with water, with formation of carbon dioxide.

Fire Fighting Instructions: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Flammable Properties and Hazards: Product is not considered a fire hazard. Closed containers may rupture (due to build up in pressure) when exposed to extreme heat.

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6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Where splashing is possible, full chemically resistant protective clothing, and boots are required.
Environmental Precautions:	Prevent entry into waterways, sewers, basements or confined areas.
Steps To Be Taken In Case Material Is Released Or Spilled:	<p>PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL.</p> <p>Ventilate the area. Dike far ahead of spill; use dry sand to contain the flow of material. Shovel into open container. Do not close container tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.</p>

7. Handling and Storage

Precautions To Be Taken in Handling:	Provide adequate ventilation. Wear all personal protection required in section 8. Do not breathe vapor. Do not get in eyes, on skin or on clothing.
Precautions To Be Taken in Storing:	Keep container tightly closed in a dry and well-ventilated place. Protect from moisture. Store away from incompatible material. Store at temperatures not exceeding 40°C/104°F.
Other Precautions:	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.

Respiratory Equipment (Specify Type):	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 NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Eye Protection:	Safety glasses, or goggles.
Protective Gloves:	Nitrile rubber and Neoprene are recommended.
Other Protective Clothing:	Where splashing is possible, full chemically resistant protective clothing, safety glasses or face shield and boots are required.
Engineering Controls (Ventilation etc.):	Good general ventilation should be sufficient to control airborne levels. Safety shower and eye bath.
Work/Hygienic/Maintenance Practices:	Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.
Environmental Exposure Controls:	Avoid runoff into storm sewers and ditches which lead to waterways. May be hazardous to the environment if released in large quantities.

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9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	Appearance: Clear to light yellow.
	Odor: Odorless.
Melting Point:	NE
Boiling Point:	> 220.00 C (428.0 F) / 760 mm Hg.
Decomposition Temperature:	NE
Autoignition Pt:	~ 896.00 F (480.0 C)
Flash Pt:	~ 336.00 F (168.9 C) Method Used: Closed Cup
Explosive Limits:	LEL: NE UEL: NE
Specific Gravity (Water = 1):	~ 1.12
Density:	~ 9.34 LB/GL
Vapor Pressure (vs. Air or mm Hg):	12 MM_HG at 50.0 C (122.0 F)
Vapor Density (vs. Air = 1):	NE
Evaporation Rate:	NE
Solubility in Water:	~
Solubility Notes:	Reacts with water.
Saturated Vapor Concentration:	NE
Percent Volatile:	0.0 % by volume.
VOC / Volume:	NP

10. Stability and Reactivity

Reactivity:	Avoid: acids, amines, alcohols, water, alkalines, strong bases. Reacts with water, with formation of carbon dioxide.
Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Moisture. Extreme temperatures.
Incompatibility - Materials To Avoid:	Avoid: acids, amines, alcohols, water, alkalines, strong bases.
Hazardous Decomposition Or Byproducts:	Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aromatic isocyanates, gases/vapors. Nitrogen oxides.
Possibility of Hazardous Polymerization:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	Will not undergo hazardous polymerization in normal storage conditions.

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11. Toxicological Information

Toxicological Information:	Respiratory Sensitization.
Irritation or Corrosion:	May cause respiratory irritation. May cause skin irritation. May cause redness, rash on skin.
Symptoms related to Toxicological Characteristics:	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.
Sensitization:	May cause rash on skin, and redness in eyes. May cause coughing by inhalation of a mist or spray.
Chronic Toxicological Effects:	May cause sensitization by inhalation.

12. Ecological Information

General Ecological Information:	Avoid release to the environment. May be hazardous to the environment if released in large quantities.
Results of PBT and vPvB assessment:	No data available.
Persistence and Degradability:	Poor Degradability.
Bioaccumulative Potential:	Significant accumulation in organisms is not to be expected.
Mobility in Soil:	Adsorption to solid soil phase is not expected.

13. Disposal Considerations

Waste Disposal Method:	Dispose of this product, product solutions and its container according to federal, state and local authority requirements. Avoid release to the environment.
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14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated.

DOT Hazard Class:

UN/NA Number:

Precautionary Label: May cause skin, eye, and respiratory irritation. May cause allergic respiratory reaction.

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated.

UN Number:

Hazard Class:

Packing Group:

IMDG EMS Page:

IMDG MFAG Number:

No

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated.

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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

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

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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.

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