



## Safety Data Sheet

Prepared in Accordance with HCS 29  
C.F.R. 1910.1200

### 1. Identification of the Substance/Mixture and the Company/Undertaking

<b>1.1 Product Identifier</b>	R380B1NL	<b>Revision Date:</b>	08/18/2023
<b>Product Name:</b>	SP-8888 CARTRIDGE HARDENER	<b>Supersedes Date:</b>	12/06/2022
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	Component of multicomponent industrial coatings - Industrial use.		
<b>1.3 Details of the supplier of the safety data sheet</b>	<p><b>Manufacturer:</b> Carboline Global Inc. 2150 Schuetz Road St. Louis, MO USA 63146</p> <p>Regulatory / Technical Information: Contact Carboline Technical Services at 1-800-848-4645</p> <p><b>Datasheet Produced by:</b> Schlereth, Ken - regulatory@carboline.com</p>		
<b>1.4 Emergency telephone number:</b>	CHEMTREC 1-800-424-9300 (Inside US) CHEMTREC +1 703 5273887 (Outside US) HEALTH - Pittsburgh Poison Control 1-412-681-6669		

### 2. Hazard Identification

#### 2.1 Classification of the substance or mixture

Hazardous to the aquatic environment, Chronic, category 3  
 Carcinogenicity, category 1A  
 Skin Corrosion, category 1  
 Skin Sensitizer, category 1

## 2.2 Label elements

### Symbol(s) of Product



### Signal Word

Danger

### Named Chemicals on Label

1,2-CYCLOHEXANEDIAMINE, BENZENE-1, 3-DIMETHANAMINE, 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE), MICROCRYSTALLINE SILICA, METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED

### HAZARD STATEMENTS

Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

### PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container to waste treatment/disposal facility in accordance with local, state, and federal regulations.

## 2.3 Other hazards

No Information

### Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

## 3. Composition/Information On Ingredients

### 3.2 Mixtures

**Hazardous ingredients**

<u>Name According to EEC</u>	<u>EINEC No.</u>	<u>CAS-No.</u>	<u>%</u>	<u>Classifications</u>	
1,2-CYCLOHEXANEDIAMINE	211-776-7	694-83-7	10 - <25	H302-312-314-317	Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Skin Corr. 1, Skin Sens. 1
BENZYL ALCOHOL	202-859-9	100-51-6	2.5 - <10	H302-312-319-332	Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2
BENZENE-1, 3-DIMETHANAMINE	216-032-5	1477-55-0	2.5 - <10	H302-314-317-332-412	Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Aquatic Chronic 3, Skin Corr. 1, Skin Sens. 1
METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED	603-894-6	135108-88-2	2.5 - <10	H302-312-314-373	Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Skin Corr. 1, STOT RE 2
4,4'-METHYLENEBIS (CYCLOHEXYLAMINE)	217-168-8	1761-71-3	2.5 - <10	H314-317-373-411	Aquatic Chronic 2, Skin Corr. 1, Skin Sens. 1, STOT RE 2
MICROCRYSTALLINE SILICA	238-878-4	14808-60-7	1.0 - <2.5	H350-372	Carc. 1A, STOT RE 1

<u>CAS-No.</u>	<u>M-Factors</u>
694-83-7	0
100-51-6	0
1477-55-0	0
135108-88-2	0
1761-71-3	0
14808-60-7	0

**Additional Information:** The text for GHS Hazard Statements shown above (if any) is given in Section 16.

## 4. First-aid Measures

### 4.1 Description of First Aid Measures

**AFTER INHALATION:** Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

**AFTER SKIN CONTACT:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.

**AFTER EYE CONTACT:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**AFTER INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

Causes burns. May cause sensitization by skin contact. May be harmful if swallowed. Corrosive after repeated contact with skin and mucous membranes.

### 4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required.

When symptoms persist or in all cases of doubt seek medical advice.

## 5. Fire-fighting Measures

### 5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Vapors may spread long distances and ignite.

**FOR SAFETY REASONS NOT TO BE USED:** Do not use a solid water stream as it may scatter and spread fire.

## 5.2 Special hazards arising from the substance or mixture

No Information

## 5.3 Advice for firefighters

**SPECIAL FIREFIGHTING PROCEDURES:** In the event of fire, wear self-contained breathing apparatus. Evacuate personnel to safe areas. Use NIOSH approved respiratory protection. Use water spray to cool unopened containers.

**SPECIAL FIREFIGHTING PROTECTION EQUIPMENT:** No Information

# 6. Accidental Release Measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. For personal protection see section 8.

## 6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

## 6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

## 6.4 Reference to other sections

No Information

# 7. Handling and Storage

## 7.1 Precautions for safe handling

**INSTRUCTIONS FOR SAFE HANDLING :** Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling.

**PROTECTION AND HYGIENE MEASURES :** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

## 7.2 Conditions for safe storage, including any incompatibilities

**CONDITIONS TO AVOID:** Heat, flames and sparks.

**STORAGE CONDITIONS:** Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

## 7.3 Specific end use(s)

The mixing and application to be in accordance with the technical data sheets.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>CAS-No.</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL</u>	<u>ACGIH Ceiling</u>
1,2-CYCLOHEXANEDIAMINE	694-83-7	N/E	N/E	N/E
BENZYL ALCOHOL	100-51-6	N/E	N/E	N/E
BENZENE-1, 3-DIMETHANAMINE	1477-55-0	N/E	N/E	0.1 MGM3
METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED	135108-88-2	N/E	N/E	N/E
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)	1761-71-3	N/E	N/E	N/E
MICROCRYSTALLINE SILICA	14808-60-7	0.025 MGM3	N/E	N/E

<u>Name</u>	<u>CAS-No.</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>
1,2-CYCLOHEXANEDIAMINE	694-83-7	N/E	N/E
BENZYL ALCOHOL	100-51-6	N/E	N/E
BENZENE-1, 3-DIMETHANAMINE	1477-55-0	N/E	N/E
METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED	135108-88-2	N/E	N/E
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)	1761-71-3	N/E	N/E
MICROCRYSTALLINE SILICA	14808-60-7	0.05 MGM3	N/E

**FURTHER ADVICE:** Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

### 8.2 Exposure controls

#### Personal Protection

**RESPIRATORY PROTECTION:** In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

**EYE PROTECTION:** Safety glasses with side-shields.

**HAND PROTECTION:** Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier. Lightweight protective clothing

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash stations and safety showers are close to the workstation location.

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Use only in an area equipped with explosion proof exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Viscous Liquid, Various Colors
<b>Physical State</b>	Liquid
<b>Odor</b>	Amine

<b>Odor threshold</b>	Not Determined
<b>pH</b>	Not Determined
<b>Melting point / freezing point (°C)</b>	Not Determined
<b>Boiling point/range (°C)</b>	375 F (191 C) - 572 F (300 C)
<b>Flash Point (°C)</b>	200°F (93°C)
<b>Evaporation rate</b>	Slower Than Ether
<b>Flammability (solid, gas)</b>	N/D
<b>Upper/lower flammability or explosive limits</b>	1.1 - 13.0
<b>Vapour Pressure, mmHg</b>	Not Determined
<b>Vapour density</b>	Heavier than Air
<b>Relative density</b>	N/D
<b>Solubility in / Miscibility with water</b>	Not Determined
<b>Partition coefficient: n-octanol/water</b>	N/D
<b>Auto-ignition temperature (°C)</b>	N/D
<b>Decomposition temperature (°C)</b>	N/D
<b>Viscosity</b>	Not Determined
<b>Explosive properties</b>	N/D
<b>Oxidising properties</b>	N/D

## 9.2 Other information

<b>VOC Content g/l:</b>	0
<b>Specific Gravity (g/cm<sup>3</sup>)</b>	1.8

## 10. Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. Toxicological Information

### 11.1 Information on toxicological effects

#### Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Skin Corrosion, category 1

Sensitization: Skin Sensitizer, category 1

Repeated dose toxicity: Unknown

Carcinogenicity: Carcinogenicity, category 1A

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

STOT-single exposure: Unknown

STOT-repeated exposure: Unknown

Aspiration hazard: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
694-83-7	1,2-CYCLOHEXANEDIAMINE	1170 mg/kg, rat, oral	1870 mg/kg, dermal, rat	Not Available	0.000	0.000
100-51-6	BENZYL ALCOHOL	1230 mg/kg rat, oral	2000 mg/kg, dermal, rabbit	4176 mg/l / 4h, Inh, Rat	No Information	No Information
1477-55-0	BENZENE-1, 3- DIMETHANAMINE	930 mg/kg, oral, rat	No Information	No Information	No Information	No Information
135108-88-2	METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED	2000 mg/kg, oral, rat		Not Available	0.000	0.000
1761-71-3	4,4'-METHYLENEBIS (CYCLOHEXYLAMINE)	>2000 mg/kg oral, rat	2110 mg/kg, rat	Not Available	0.000	0.000
14808-60-7	MICROCRYSTALLINE SILICA	22500 mg/kg	No Information	No Informaiton	No Information	No Information

**Additional Information:**

Constituents of this product may include crystalline silica which, if inhalable, may cause silicosis, a form or progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group 1 carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities. Constituents may also include abestiform or non-abestiform tremolite or other silicates as impurities, and above dei minimus exposure to these impurities in inhalable form may be carcinogenic or cause other serious lung problems.

## 12. Ecological Information

**12.1 Toxicity:**

<b>EC50 48hr (Daphnia):</b>	No information available.
<b>IC50 72hr (Algae):</b>	No information available.
<b>LC50 96hr (fish):</b>	No information available.

**12.2 Persistence and degradability:** No information available.

**12.3 Bioaccumulative potential:** No information available.

**12.4 Mobility in soil:** No information available.

**12.5 Results of PBT and vPvB assessment:** The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

**12.6 Other adverse effects:** No information available.

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
694-83-7	1,2-CYCLOHEXANEDIAMINE	19.8 mg/l (Daphnia)	29.6 mg/l (Algae)	No information
100-51-6	BENZYL ALCOHOL	230 mg/l (Daphnia)	700 mg/l (Algae)	10 mg/l (Fish)
1477-55-0	BENZENE-1, 3-DIMETHANAMINE	No information	No information	No information
135108-88-2	METHYLENEOXIDE, POLYMER WITH BENZENAMINE HYDROGENATED	15.4 mg/l (Daphnia Magna)	43.9 mg/l (Algae)	63 mg/l Guppy (Poecilia reticulata)
1761-71-3	4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)	6.84 mg/l (Daphnia Magna)	140 mg/l (Algae)	>100 mg/l ((Leuciscus idus)
14808-60-7	MICROCRYSTALLINE SILICA	No information	No information	No information

## 13. Disposal Considerations

**13.1 WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport Information

14.1	UN number	UN2735
14.2	UN proper shipping name	Amines, Liquid, Corrosive NOS
	Technical name	(Benzene-1,3-Dimethanamine (MXDA), 1,4-Bis(aminocyclohexyl) methane)
14.3	Transport hazard class(es)	8
	Subsidiary shipping hazard	N/A
14.4	Packing group	PGII
14.5	Environmental hazards	No information available.
14.6	Special precautions for user	No information available.
	EmS-No.:	F-A, S-B
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	No information available.

## 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

### U.S. Federal Regulations: As follows -

#### CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Carcinogenicity, Skin Corrosion or Irritation, Respiratory or Skin Sensitization

#### Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No SARA 313 substances exist in this product above de minimis concentrations.

#### Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

### U.S. State Regulations: As follows -

#### New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
BARIUM SULFATE	7727-43-7
FELDSPAR	68476-25-5
AMINE CURING AGENT	TRADE SECRET

**Pennsylvania Right-To-Know**

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
BARIUM SULFATE	7727-43-7
FELDSPAR	68476-25-5
AMINE CURING AGENT	TRADE SECRET

**CALIFORNIA PROPOSITION 65**

WARNING: Cancer and Reproductive Harm -- [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**International Regulations: As follows -****\* Canadian DSL:**

All chemical ingredients included on inventory (DSL)

**15.2 Chemical Safety Assessment:**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**16. Other Information****Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Reasons for revision**

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.