



Safety Data Sheet

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

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

| | | | |
|--|--|-------------------------|------------|
| 1.1 Product Identifier | R377B1NL | Revision Date: | 12/05/2022 |
| Product Name: | SP-4888 BRUSH HARDENER | Supersedes Date: | 03/29/2022 |
| 1.2 Relevant identified uses of the substance or mixture and uses advised against | Component of multicomponent industrial coatings - Industrial use. | | |
| 1.3 Details of the supplier of the safety data sheet | <p>Manufacturer : Specialty Polymer Coatings Division Carboline Global Inc. 2150 Schuetz Road St. Louis, Mo. 63146</p> <p>Regulatory / Technical Information: 604-514-9711</p> <p>Datasheet Produced by: Schlereth, Ken - regulatory@carboline.com</p> | | |
| 1.4 Emergency telephone number: | 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

Acute Toxicity, Dermal, category 4
 Acute Toxicity, Inhalation, category 4
 Acute Toxicity, Oral, category 4
 Hazardous to the aquatic environment, Chronic, category 2
 Reproductive Toxicity, category 2
 Skin Corrosion, category 1
 Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

TRIS-2,4,6- (DIMETHYLAMINOMETHYL)PHENOL, 4-TERT-BUTYLPHENOL, BENZYL ALCOHOL, 2-PIPERAZIN-1-YLETHYLAMINE, ISOPHORONEDIAMINE, ALIPHATIC AMINE, ALCOHOL, ALICYCLIC AMINE

HAZARD STATEMENTS

| | | |
|---|--------|--|
| Acute Toxicity, Oral, category 4 | H302 | Harmful if swallowed. |
| Acute Toxicity, Dermal, category 4 | H312 | Harmful in contact with skin. |
| Skin Corrosion, category 1 | H314-1 | Causes severe skin burns and eye damage. |
| Skin Sensitizer, category 1 | H317 | May cause an allergic skin reaction. |
| Acute Toxicity, Inhalation, category 4 | H332 | Harmful if inhaled. |
| Reproductive Toxicity, category 2 | H361f | Suspected of damaging fertility. |
| Hazardous to the aquatic environment, Chronic, category 2 | H411 | Toxic to aquatic life with long lasting effects. |

PRECAUTION PHRASES

| | |
|--------------|---|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| 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 |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P333+313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P352 | Wash with plenty of soap and water. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect spillage. |

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> | |
|--|------------------|-----------------|------------|------------------------|--|
| BENZYL ALCOHOL | 202-859-9 | 100-51-6 | 25 - <50 | H302-312-319-332 | Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2 |
| ISOPHORONEDIAMIN E | 220-666-8 | 2855-13-2 | 25 - <50 | H302-312-314-317-412 | Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Aquatic Chronic 3, Skin Corr. 1, Skin Sens. 1A |
| 2-PIPERAZIN-1- YLETHYLAMINE | 205-411-0 | 140-31-8 | 2.5 - <10 | H302-312-314-317-412 | Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Aquatic Chronic 3, Skin Corr. 1, Skin Sens. 1 |
| 4-TERT- BUTYLPHENOL | 202-679-0 | 98-54-4 | 2.5 - <10 | H315-318-361F-410 | Aquatic Chronic 1, Eye Dam. 1, Repr. 2, Skin Irrit. 2 |
| ALCOHOL | | TRADE SECRET | 2.5 - <10 | H302-319 | |
| TRIS-2,4,6- (DIMETHYLAMINOMET HYL)PHENOL | 202-013-9 | 90-72-2 | 2.5 - <10 | H302-315-319 | Acute Tox. 4 Oral, Eye Irrit. 2, Skin Irrit. 2 |
| ALICYCLIC AMINE | | TRADE SECRET | 2.5 - <10 | H314-317 | |
| ALIPHATIC AMINE | | TRADE SECRET | 1.0 - <2.5 | H302-314-317-332-412 | |

| <u>CAS-No.</u> | <u>M-Factors</u> |
|-----------------|------------------|
| 100-51-6 | 0 |
| 2855-13-2 | 0 |
| 140-31-8 | 0 |
| 98-54-4 | 0 |
| TRADE SECRET | 0 |
| 90-72-2 | 0 |
| TRADE SECRET | 0 |
| TRADE SECRET | 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 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: No Information

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. 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. Avoid breathing vapors, mist or gas. 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)

No specific advice for end use available.

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> |
|--|----------------|------------------|-------------------|----------------------|
| BENZYL ALCOHOL | 100-51-6 | N/E | N/E | N/E |
| ISOPHORONEDIAMINE | 2855-13-2 | N/E | N/E | N/E |
| 2-PIPERAZIN-1-YLETHYLAMINE | 140-31-8 | N/E | N/E | N/E |
| 4-TERT-BUTYLPHENOL | 98-54-4 | N/E | N/E | N/E |
| ALCOHOL | TRADE SECRET | N/E | N/E | N/E |
| TRIS-2,4,6- (DIMETHYLAMINOMETHYL) PHENOL | 90-72-2 | N/E | N/E | N/E |
| ALICYCLIC AMINE | TRADE SECRET | N/E | N/E | N/E |
| ALIPHATIC AMINE | TRADE SECRET | N/E | N/E | 0.1 mg/m3 |

| <u>Name</u> | <u>CAS-No.</u> | <u>OSHA PEL</u> | <u>OSHA STEL</u> |
|--|----------------|-----------------|------------------|
| BENZYL ALCOHOL | 100-51-6 | N/E | N/E |
| ISOPHORONEDIAMINE | 2855-13-2 | N/E | N/E |
| 2-PIPERAZIN-1-YLETHYLAMINE | 140-31-8 | N/E | N/E |
| 4-TERT-BUTYLPHENOL | 98-54-4 | N/E | N/E |
| ALCOHOL | TRADE SECRET | N/E | N/E |
| TRIS-2,4,6- (DIMETHYLAMINOMETHYL) PHENOL | 90-72-2 | N/E | N/E |
| ALICYCLIC AMINE | TRADE SECRET | N/E | N/E |
| ALIPHATIC AMINE | TRADE SECRET | N/E | 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

| | |
|---|------------------------------|
| Appearance: | Amber Liquid |
| Physical State | Liquid |
| Odor | Ammoniacal |
| Odor threshold | Not Determined |
| pH | Not Determined |
| Melting point / freezing point (°C) | Not Determined |
| Boiling point/range (°C) | 173 F (78 C) - 431 F (222 C) |
| Flash Point (°C) | 200°F (93°C) |
| Evaporation rate | Slower Than Ether |
| Flammability (solid, gas) | N/D |
| Upper/lower flammability or explosive limits | 1.3 - 19.0 |
| Vapour Pressure, mmHg | Not Determined |
| Vapour density | Heavier than Air |
| Relative density | N/D |
| Solubility in / Miscibility with water | Not Determined |
| Partition coefficient: n-octanol/water | N/D |
| Auto-ignition temperature (°C) | N/D |
| Decomposition temperature (°C) | N/D |
| Viscosity | Not Determined |
| Explosive properties | N/D |
| Oxidising properties | N/D |

9.2 Other information

| | |
|--|------|
| VOC Content g/l: | 0 |
| Specific Gravity (g/cm³) | 1.01 |

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 (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), 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: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Reproductive Toxicity, category 2

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> |
|-----------------|--|--|-------------------------------|-----------------------------|-----------------|-----------------------|
| 100-51-6 | BENZYL ALCOHOL | 1230 mg/kg rat, oral | 2000 mg/kg, dermal, rabbit | 4176 mg/l / 4h, Inh, Rat | | |
| 2855-13-2 | ISOPHORONEDIAMINE | 500 mg/kg oral | | Not Available | | |
| 140-31-8 | 2-PIPERAZIN-1- YLETHYLAMINE | Not Available | Not Available | Not Available | 0.000 | 0.000 |
| 98-54-4 | 4-TERT-BUTYLPHENOL | 5600 mg/kg skin 1500 mg/ kg oral | | | 0.000 | 0.000 |
| TRADE SECRET | ALCOHOL | Not Available | Not Available | Not Available | Not Available | Not Available |
| 90-72-2 | TRIS-2,4,6- (DIMETHYLAMINOMETHYL) PHENOL | 1999 mg/kg (rat) | Not Available | Not Available | 0.000 | 0.000 |
| TRADE SECRET | ALICYCLIC AMINE | Not Available | Not Available | Not Available | Not Available | Not Available |
| TRADE SECRET | ALIPHATIC AMINE | Not Available | Not Available | Not Available | Not Available | Not Available |

Additional Information:

No Information

12. Ecological Information

- 12.1 Toxicity:**
- EC50 48hr (Daphnia):** No information available.
- IC50 72hr (Algae):** No information available.
- LC50 96hr (fish):** 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> |
|-----------------|---|--------------------|------------------|------------------|
| 100-51-6 | BENZYL ALCOHOL | 230 mg/l (Daphnia) | 700 mg/l (Algae) | 10 mg/l (Fish) |
| 2855-13-2 | ISOPHORONEDIAMINE | No information | No information | No information |
| 140-31-8 | 2-PIPERAZIN-1-YLETHYLAMINE | No information | No information | No information |
| 98-54-4 | 4-TERT-BUTYLPHENOL | No information | No information | No information |
| TRADE SECRET | ALCOHOL | No information | No information | No information |
| 90-72-2 | TRIS-2,4,6- (DIMETHYLAMINOMETHYL) PHENOL | No information | 84 mg/l (Algae) | 175 mg/l (Fish) |
| TRADE SECRET | ALICYCLIC AMINE | No information | No information | No information |
| TRADE SECRET | ALIPHATIC AMINE | 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** (Aminoethylpiperazine)
- 14.3 Transport hazard class(es)** 8
- Subsidiary shipping hazard** N/A
- 14.4 Packing group** PGIII
- 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:

Acute Toxicity (any route of exposure), Reproductive toxicity, 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> |
|----------------------|----------------|
| AMINE CUREING 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> |
|----------------------|----------------|
| AMINE CUREING AGENT | TRADE SECRET |

CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm -- www.P65Warnings.ca.gov

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

This product contains one or several components that are not on the Canadian DSL nor NDSL lists.

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. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H361F | Suspected of damaging fertility. |
| H410 | Very 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.

