



Material Safety Data Sheet

**CHEMTREC Transportation
Emergency Phone: 800-424-
9300**

**Pittsburgh Poison Control
Center
Health Emergency No.: 412-
681-6669**

•NOTE: The CHEMTREC Transportation
•Emergency Phone is to be used only in the
•event of chemical emergencies involving a
•spill, leak, fire, exposure or accident involving
•chemicals

Section 1 - Chemical Product / Company Information

Product Name: RUSTBOND FC PART A **Revision Date:** 01/31/2006
Identification Number: PLMSDS 0939A1NL **Supersedes :** 08/01/2005
Product Use/Class: Polymeric Epoxy Amine - FOR INDUSTRIAL USE ONLY
Preparer: Regulatory, Department
Manufacturer: Carboline Company
350 Hanley Industrial Ct.
St. Louis, MO 63144

Section 2 - Composition / Information On Ingredients

| Chemical Name | CAS Number | Weight % | Less Than | ACGIH TLV-TWA | ACGIH TLV-STEL | OSHA PEL-TWA | OSHA-CEIL |
|----------------|-------------|----------|-----------|---------------|----------------|--------------|-----------|
| EPOXY PHENOL | 028064-14-4 | 90.0 | | N/E | N/E | N/E | N/E |
| NOVOLAC RESIN | | | | | | | |
| GLYCIDYL ETHER | 171263-25-5 | 10.0 | | 2.0 PPM | NE | NE | NE |
| TOLUENE | 108-88-3 | 5.0 | | 50 PPM | N/E | 150 PPM | NE |

Section 3 - Hazards Identification

Emergency Overview: FLAMMABLE liquid and vapor.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Direct skin contact may cause irritation. May cause allergic skin reaction.

Effects Of Overexposure - Inhalation: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache, or nausea. May cause nose and throat irritation.

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: No Information.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Medical Conditions Prone to Aggravation by Exposure: If you have a condition that could be aggravated by exposure to dust or organic vapors, see a physician prior to use. If sensitized to amines, epoxies, or other chemicals do not use. See a physician if a medical condition exists.

Section 4 - First Aid Measures

First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

First Aid - Skin Contact: In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Launder clothing before reuse. If rash or irritation develops, consult a physician.

First Aid - Inhalation: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

First Aid - Ingestion: If swallowed do not induce vomiting. Seek immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point, F: 45F (7C)
(Setaflash)

Lower Explosive Limit, %: 0.8
Upper Explosive Limit, %: 21.0

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Flammable Liquid. Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and to wear conductive and non-sparking shoes.

Special Firefighting Procedures: Flammable. Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow exposure controls/personal protection guidelines in Section 8. Contain and soak up residual with an absorbent (clay or sand). Take up absorbant material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section 15 for SARA Title III and CERCLA information.

Section 7 - Handling And Storage

Handling: Do not get in eyes, on skin, or on clothing. Keep container tightly closed when not in use. Wear personal protection equipment. Do not breathe vapors. Wash thoroughly after handling. If pouring or transferring materials, ground all containers and tools. Do not weld, heat, cut or drill on full or empty containers. Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

Storage: Keep away from heat, sparks, open flames and oxidizing agents. Keep containers closed. Store in a cool, dry place with adequate ventilation.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).

Respiratory Protection: Use only with ventilation to keep levels below exposure guidelines listed in Section 2. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use MSHA/NISOH approved supplied air respirator. Follow all current OSHA requirements for respirator use.

Skin Protection: Recommend impervious gloves and clothing to avoid skin contact. If material penetrates to skin, change gloves and clothing. The use of protective creams may be beneficial to certain individuals. Protective creams should be applied before exposure.

Eye Protection: Recommend safety glasses with side shields or chemical goggles to avoid eye contact.

Other protective equipment: Eye wash and safety showers should be readily available.

Hygienic Practices: Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and allow hazardous materials to pass through. Check shoes carefully after soaking before reuse.

Section 9 - Physical And Chemical Properties

| | | | |
|---------------------------|--------------------------------------|--------------------------|-------------------|
| Boiling Range: | 176 F (80 C) - 334 F (168 C) | Vapor Density: | Heavier than Air |
| Odor: | Slight Aromatic | Odor Threshold: | N/D |
| Appearance: | Clear, Pale Yellow Viscous Liquid | Evaporation Rate: | Slower Than Ether |
| Solubility in H2O: | N/D | | |
| Freeze Point: | N/D | Specific Gravity: | 1.14 |
| Vapor Pressure: | N/D | PH: | N/D |
| Physical State: | Liquid | | |

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Heat, sparks and open flames.

Incompatibility: Keep away from strong oxidizing agents, heat and open flames.

Hazardous Decomposition Products: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N/D

Product LC50: N/D

| Chemical Name | CAS Number | LD50 | LC50 |
|---------------|------------|------|------|
|---------------|------------|------|------|

| | | | |
|----------------------------|-------------|---|--------------------------------|
| EPOXY PHENOL NOVOLAC RESIN | 028064-14-4 | >5,000 MG/KG. ORAL, RAT | >1.7 MG/L (AEROSOL) 4 HR |
| GLYCIDYL ETHER | 171263-25-5 | ORAL 5G/KG | NOT AVAILABLE |
| TOLUENE | 108-88-3 | 5.0 G/KG RAT ORAL, 14G/KG RABBIT DERMAL | 8000 PPM/4HRS, RAT, INHALATION |

Section 12 - Ecological Information

Ecological Information: No data

Section 13 - Disposal Information

Disposal Information: Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

Section 14 - Transportation Information

| | | | |
|----------------------------------|--------|-------------------------|-----|
| DOT Proper Shipping Name: | Paint | Packing Group: | II |
| DOT Technical Name: | N/A | Hazard Subclass: | N/A |
| DOT Hazard Class: | 3 | Resp. Guide | 128 |
| | | Page: | |
| DOT UN/NA Number: | UN1263 | | |

Section 15 - Regulatory Information

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:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

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:

| <u>Chemical Name</u> | <u>CAS Number</u> |
|----------------------|-------------------|
| TOLUENE | 108-88-3 |

TOXIC SUBSTANCES CONTROL ACT

All components of this product are listed on the TSCA inventory.

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

| <u>Chemical Name</u> | <u>CAS Number</u> |
|----------------------|-------------------|
| PARA-XYLENE | 000106-42-3 |

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 Number</u> |
|----------------------|-------------------|
| ADDITIVE | TRADE SECRET |
| POLYSILOXANE | CTS-935 |

PENNSYLVANIA RIGHT-TO-KNOW

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

CALIFORNIA PROPOSITION 65

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

| <u>Chemical Name</u> | <u>CAS Number</u> |
|----------------------|-------------------|
| ETHYL BENZENE | 100-41-4 |
| EPICHLOROHYDRIN | 106-89-8 |

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

| <u>Chemical Name</u> | <u>CAS Number</u> |
|----------------------|-------------------|
| TOLUENE | 108-88-3 |
| EPICHLOROHYDRIN | 106-89-8 |

INTERNATIONAL REGULATIONS AS FOLLOWS:

CANADIAN WHMIS

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B2 D2B

Section 16 - Other Information

HMIS Ratings

Health: 1 **Flammability:** 4 **Reactivity:** 0 **Personal Protection:** X

VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED): 85

REASON FOR REVISION: Changes made in Section(s): 15

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

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



Material Safety Data Sheet

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Health Emergency No.: 412-
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•NOTE: The CHEMTREC Transportation
•Emergency Phone is to be used only in the
•event of chemical emergencies involving a
•spill, leak, fire, exposure or accident involving
•chemicals

Section 1 - Chemical Product / Company Information

Product Name: RUSTBOND FC PART B **Revision Date:** 07/25/2006
Identification Number: PLMSDS 0939B1NL **Supersedes :** 04/05/2006
Product Use/Class: Polymeric Epoxy Amine - FOR INDUSTRIAL USE ONLY
Preparer: Regulatory, Department
Manufacturer: Carboline Company
350 Hanley Industrial Ct.
St. Louis, MO 63144

Section 2 - Composition / Information On Ingredients

| Chemical Name | CAS Number | Weight % | Less Than | ACGIH TLV-TWA | ACGIH TLV-STEL | OSHA PEL-TWA | OSHA-CEIL |
|--------------------------------|-------------|----------|-----------|---------------|----------------|--------------|-----------|
| ALIPHATIC AMINE | CTS-125 | 30.0 | | NE | NE | .1 MG/M3 | NE |
| BENZYL ALCOHOL | 000100-51-6 | 20.0 | | N/E | N/E | N/E | N/E |
| TOLUENE | 108-88-3 | 15.0 | | 50 PPM | N/E | 150 PPM | NE |
| 4-NONYL PHENOL, BRANCHED | 084852-15-3 | 15.0 | | N/E | N/E | N/E | N/E |
| ISOPHORONE DIAMINE | 002855-13-2 | 5.0 | | N/E | N/E | N/E | N/E |
| BENZENE-1, 3- DIMETHANAMINE | 1477-55-0 | 5.0 | | N/E | N/E | N/E | N/E |
| ORANOSILANE ESTER | 919-30-2 | 5.0 | | NE | NE | NE | NE |
| P-TERT- BUTYLPHENOL | 000098-54-4 | 5.0 | | N/E | N/E | N/E | N/E |

Section 3 - Hazards Identification

Emergency Overview: FLAMMABLE liquid and vapor. Corrosive Material. Harmful if swallowed. Can cause eye and skin burns. May cause skin sensitization.

Effects Of Overexposure - Eye Contact: Can cause eye burns.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through the skin. Can cause allergic skin reaction. Can cause skin burns.

Effects Of Overexposure - Inhalation: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache, or nausea. May cause nose and throat irritation. May cause lung irritation. May cause allergic respiratory reaction, effects may be permanent.

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Medical Conditions Prone to Aggravation by Exposure: If you have a condition that could be aggravated by exposure to dust or organic vapors, see a physician prior to use. If sensitized to amines, epoxies, or other chemicals do not use. See a physician if a medical condition exists.

Section 4 - First Aid Measures

First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

First Aid - Skin Contact: In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

First Aid - Inhalation: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

First Aid - Ingestion: If swallowed do not induce vomiting. Seek immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point, F: 45F (7C)
(Setaflash)

Lower Explosive Limit, %: 0.9
Upper Explosive Limit, %: 9.5

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Flammable Liquid. Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and to wear conductive and non-sparking shoes.

Special Firefighting Procedures: Flammable. Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow exposure controls/personal protection guidelines in Section 8. Contain and soak up residual with an absorbent (clay or sand). Take up absorbant material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section 15 for SARA Title III and CERCLA information.

Section 7 - Handling And Storage

Handling: Do not get in eyes, on skin, or on clothing. Keep container tightly closed when not in use. Wear personal protection equipment. Do not breathe vapors. Wash thoroughly after handling. If pouring or transferring materials, ground all containers and tools. Do not weld, heat, cut or drill on full or empty containers. Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

Storage: Keep away from heat, sparks, open flames and oxidizing agents. Keep containers closed. Store in a cool, dry place with adequate ventilation.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).

Respiratory Protection: Use only with ventilation to keep levels below exposure guidelines listed in Section 2. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use MSHA/NIOSH approved supplied air respirator. Follow all current OSHA requirements for respirator use.

Skin Protection: Recommend impervious gloves and clothing to avoid skin contact. If material penetrates to skin, change gloves and clothing. The use of protective creams may be beneficial to certain individuals. Protective creams should be applied before exposure.

Eye Protection: Recommend safety glasses with side shields or chemical goggles to avoid eye contact.

Other protective equipment: Eye wash and safety showers should be readily available.

Hygienic Practices: Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and allow hazardous materials to pass through. Check shoes carefully after soaking before reuse.

Section 9 - Physical And Chemical Properties

| | | | |
|---------------------------|-------------------------------|--------------------------|-------------------|
| Boiling Range: | 212 F (100 C) - 232 F (111 C) | Vapor Density: | Heavier than Air |
| Odor: | Solvent | Odor Threshold: | N/D |
| Appearance: | Greenish Brown Gel | Evaporation Rate: | Slower Than Ether |
| Solubility in H2O: | N/D | | |
| Freeze Point: | N/D | Specific Gravity: | 1.02 |
| Vapor Pressure: | N/D | PH: | N/D |
| Physical State: | Gel / Liquid | | |

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Heat, sparks and open flames.

Incompatibility: Keep away from strong oxidizing agents, heat and open flames.

Hazardous Decomposition Products: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N/D

Product LC50: N/D

| Chemical Name | CAS Number | LD50 | LC50 |
|----------------------------|-------------|---|--------------------------------|
| ALIPHATIC AMINE | CTS-125 | >900 MG/KG | NE |
| BENZYL ALCOHOL | 000100-51-6 | 1230MG/KG RAT,ORAL | 1000PPM/8HRS RAT,INHALATION |
| TOLUENE | 108-88-3 | 5.0 G/KG RAT ORAL, 14G/KG RABBIT DERMAL | 8000 PPM/4HRS, RAT, INHALATION |
| 4-NONYL PHENOL, BRANCHED | 084852-15-3 | 1620 MG/KG ORAL 2140 MG/KG SKIN | NOT AVAILABLE |
| ISOPHORONE DIAMINE | 002855-13-2 | >0.5 G/KG ORAL | >2 G/KG DERMAL |
| BENZENE-1, 3-DIMETHANAMINE | 1477-55-0 | 930 MG/KG, ORAL, 2 G/KG. SKIN | NOT AVAILABLE |
| ORANOSILANE ESTER | 919-30-2 | 1780 MG/KG, ORAL, RAT | NOT AVAILABLE |
| P-TERT-BUTYLPHENOL | 000098-54-4 | 5600 MG/KG SKIN 1500MG/KG ORAL | NOT AVAILABLE |

Section 12 - Ecological Information

Ecological Information: No data

Section 13 - Disposal Information

Disposal Information: Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

Section 14 - Transportation Information

| | | |
|----------------------------------|-----------------------------------|---------------------------|
| DOT Proper Shipping Name: | Flammable Liquid Corrosive NOS | Packing Group: II |
| DOT Technical Name: | Toluene, m-Xylenediamine | Hazard Subclass: 8 |
| DOT Hazard Class: | 3 | Resp. Guide 132 |
| | | Page: |
| DOT UN/NA Number: | UN2924 | |

Additional Notes: None.

Section 15 - Regulatory Information

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:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

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:

Chemical Name
TOLUENE

CAS Number
108-88-3

TOXIC SUBSTANCES CONTROL ACT

All components of this product are listed on the TSCA inventory.

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

Chemical Name
NAPHTHALENE

CAS Number
91-20-3

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.

Chemical Name
POLYSTYRENE

CAS Number
9003-53-6

PENNSYLVANIA RIGHT-TO-KNOW

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

Chemical Name
POLYSTYRENE

CAS Number
9003-53-6

PROPYLENE GLYCOL PHENYL ETHER

770-35-4

MODIFIED CYCLOALIPHATIC AMINE

TRADE SECRET

CALIFORNIA PROPOSITION 65

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name
NAPHTHALENE

CAS Number
91-20-3

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

Chemical Name
TOLUENE

CAS Number
108-88-3

INTERNATIONAL REGULATIONS AS FOLLOWS:

CANADIAN WHMIS

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B2 D2B E

Section 16 - Other Information

HMIS Ratings

Health: 3

Flammability: 3

Reactivity: 2

Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED): 85

REASON FOR REVISION: Changes made in Section(s): 3

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

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