**SDS:** 0007050
**Date Prepared:** 02/05/2017

# SAFETY DATA SHEET

## 1. IDENTIFICATION

| | |
|---|---|
| **Product Name:** | **CONAPOXY® FR-1047 Black Resin** |
| **Product Description:** | Mixture of epoxy resins and fillers |
| **Synonyms:** | None |
| **Chemical Family:** | Epoxy resin |
| **Molecular Formula:** | Mixture |
| **Molecular Weight:** | Mixture |
| **Intended/Recommended Use:** | Potting compound |

CYTEC INDUSTRIES INC., 504 CARNEGIE CENTER, PRINCETON, NEW JERSEY 08540, USA
**For Product and all Non-Emergency Information call** 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

**EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:**
**Asia Pacific:**
Australia - +61 2 8014 4558 (Carechem24)
China (PRC) - +86 0532 83889090 (NRCC) +86 512 8090 3042 (Carechem24)
New Guinea - +61 2 8014 4558 (Carechem24)
New Zealand - +64 9 929 1483 (Carechem24)
India, Japan, Korea, Malaysia, Thailand - +65 3158 1074 (Carechem24 Singapore)
India (Hindi Speaking Only) - +65 3158 1198 or 000800 100 7479 (Carechem24 Singapore)
**Canada:** 800 424 9300 (Within US,Canada) +1 (703) 527-3887 (International) (CHEMTREC)
**Europe/Africa/Middle East (Carechem24 UK):**
Europe, Middle East, Africa, Israel - +44 1235 239 670
(Arabic speaking countries) - +44 1235 239 671
**Latin America:**
Brazil - +55 11 3197 5891 (Carechem24)
Chile - +56 2 2582 9336 (Carechem24)
All Others - +44 1235 239 670 (Carechem24 UK)
**USA:** 800 424 9300 (Within US,Canada) +1 (703) 527-3887 (International) (CHEMTREC)



## 2. HAZARDS IDENTIFICATION

**GHS Classification**
Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 2A
Skin Sensitizer Hazard Category 1B
Aquatic Environment Acute Hazard Category 2
Aquatic Environment Chronic Hazard Category 2

**LABEL ELEMENTS**

**Signal Word**
Warning

**Hazard Statements**
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects

**Precautionary Statements**
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
IF ON SKIN: Wash with plenty of soap and water.
Specific treatment (see supplemental first aid instructions on this label).
Take off all contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Dispose of contents/container in accordance with local and national regulations.

**Hazards Not Otherwise Classified (HNOC), Other Hazards**
Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**HAZARDOUS INGREDIENTS**

| Component / CAS No. | % | GHS Classification | Carcinogen |
|---|---|---|---|
| Reaction product: Bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700)<br>25068-38-6 | 30 - 60 | Skin Irrit. 2 (H315)<br>Eye Irrit. 2A (H319)<br>Skin Sens. 1B (H317)<br>Aquatic Acute 2 (H401)<br>Aquatic Chronic 2 (H411) | - |
| Alumina trihydrate<br>21645-51-2 | 30 - 60 | Not Classified | - |
| Neopentyl glycol diglycidyl ether<br>17557-23-2 | 1 - 5 | Skin Irrit. 2 (H315)<br>Eye Irrit. 2B (H320)<br>Skin Sens. 1B (H317) | - |
| Kaolin<br>1332-58-7 | < 2 | Not Classified | - |
| Carbon black<br>1333-86-4 | < 1 | Not Classified | IARC 2B<br>ACGIH A3 |

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

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# 4. FIRST AID MEASURES

### DESCRIPTION OF FIRST AID MEASURES

**Eye Contact:**
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

**Skin Contact:**
Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

**Ingestion:**
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Inhalation:**
Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

### MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

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# 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:**
Use water spray, carbon dioxide or dry chemical.

**Extinguishing Media to Avoid:**
full water jet

**Protective Equipment:**
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

**Special Hazards:**
Keep containers cool by spraying with water if exposed to fire.

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# 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**
Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

**Methods For Cleaning Up:**
Sweep up into containers for disposal. Flush spill area with water.

**References to other sections:**
See Sections 8 and 13 for additional information.

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# 7. HANDLING AND STORAGE

# 7. HANDLING AND STORAGE

**HANDLING**

**Precautions:** Avoid release to the environment. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves and eye/face protection.

**Special Handling Statements:** None

**STORAGE**

Store in accordance with local, state, and federal regulations.

**Storage Temperature:** Room temperature
**Reason:** Quality.

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# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Measures:**
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

**Respiratory Protection:**
Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

**Eye Protection:**
Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

**Skin Protection:**
Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Barrier creams may be used in conjunction with the gloves to provide additional skin protection.

**Hand Protection:**
Nitrile rubber gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

**Additional Advice:**
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

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**Exposure Limit(s)**

The below constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**1332-58-7 Kaolin**

| | |
|---|---|
| OSHA (PEL): | 15 mg/m$^3$ total dust (TWA)<br>5 mg/m$^3$ respirable fraction (TWA) |
| ACGIH (TLV): | 2 mg/m$^3$ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter (TWA) |
| Other Value: | Not established |

**1333-86-4 Carbon black**

| | |
|---|---|
| OSHA (PEL): | 3.5 mg/m$^3$ (TWA) |
| ACGIH (TLV): | 3 mg/m$^3$ inhalable particulate matter (TWA) |

**1332-58-7 Kaolin**

| | |
|---|---|
| Other Value: | Not established |

**21645-51-2 Alumina trihydrate**

| | |
|---|---|
| OSHA (PEL): | Not established |
| ACGIH (TLV): | 1 mg/m$^3$ respirable particulate matter (TWA)(as Aluminum insoluble compounds) |
| Other Value: | Not established |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Color:** | black | | |
| **Appearance:** | viscous liquid | | |
| **Odor:** | characteristic | | |
| **Boiling Point:** | Not available | | |
| **Melting Point:** | Not available | | |
| **Vapor Pressure:** | Not available | | |
| **Specific Gravity/Density:** | 1.7 | | |
| **Vapor Density:** | Not available | | |
| **Percent Volatile (% by wt.):** | Not available | | |
| **pH:** | Not available | | |
| **Saturation In Air (% By Vol.):** | Not available | | |
| **Evaporation Rate:** | Negligible | | |
| **Solubility In Water:** | Not available | | |
| **Volatile Organic Content:** | Not available | | |
| **Flash Point:** | >100 °C | 212 °F | Tag Closed Cup |
| **Flammability (solid, gas):** | Not available | | |
| **Flammable Limits (% By Vol):** | Not available | | |
| **Autoignition (Self) Temperature:** | Not available | | |
| **Decomposition Temperature:** | Not available | | |
| **Partition coefficient (n-octanol/water):** | Not available | | |
| **Odor Threshold:** | Not available | | |
| **Viscosity (Kinematic):** | Not available | | |

**DUST HAZARD INFORMATION**

| | |
|---|---|
| **Particle Size (microns):** | Not applicable |
| **Kst (bar-m/sec):** | Not applicable |
| **Maximum Explosion Pressure (Pmax):** | Not applicable |
| **Dust Class:** | Not applicable |
| **Minimum Ignition Energy (MIE) (mJ):** | Not applicable |
| **Minimum Ignition Temperature (MIT) (°C):** | Not applicable |
| **Minimum Explosive Concentration (MEC) (g/m$^3$):** | Not applicable |
| **Limiting Oxygen Concentration (LOC) (%):** | Not applicable |

## 10. STABILITY AND REACTIVITY

**Reactivity:** No information available

**Stability:** Stable

**Conditions To Avoid:** Avoid excess heating over long periods of time.

**Polymerization:** May occur

**Conditions To Avoid:** Avoid contact with acids, oxidizing agents, bases or amines.

| | |
|---|---|
| **Hazardous Decomposition Products:** | oxides of carbon<br>oxides of phosphorus<br>phenols |

# 11. TOXICOLOGICAL INFORMATION

**PRODUCT TOXICITY INFORMATION**

**Likely Routes of Exposure:** Oral, Skin, Eyes.

**ACUTE TOXICITY DATA**

| | | | |
|---|---|---|---|
| oral (gavage) | rat | Acute LD50 | >2000 mg/kg |
| dermal | rabbit | Acute LD50 | >2000 mg/kg |
| inhalation | rat | Acute LC50 4 hr | >5 mg/l (Dust/Mist) |

**LOCAL EFFECTS ON SKIN AND EYE**

| | | |
|---|---|---|
| Acute Irritation | skin | Irritating |
| Acute Irritation | eye | Irritating |

**ALLERGIC SENSITIZATION**

| | | |
|---|---|---|
| Sensitization | skin | Sensitizing |
| Sensitization | respiratory | No data |

**GENOTOXICITY**

**Assays for Gene Mutations**

| | |
|---|---|
| Ames Salmonella Assay | No data |

**OTHER INFORMATION**

The product toxicity information above has been estimated.

**HAZARDOUS INGREDIENT TOXICITY DATA**

Reaction product: Bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700) has oral (rat) LD50 and dermal (rabbit) LD50 values of >5,000 mg/kg and >6,000 mg/kg, respectively. This material produced moderate eye and skin irritation in animal tests. It is a moderate skin sensitizer. No adverse effects were observed on embryonic or fetal development in animal teratology studies. A variety of mutagenicity tests produced mixed results. Two-year chronic studies (dermal and skin painting) in mice showed no increase in tumor incidence in two mouse strains. However, a third mouse strain showed a slight increase in tumors at a high dose. IARC concluded that this material is not classified as a carcinogen. Chronic ingestion caused reduced weight gain and death in laboratory animals. The oral (rat) LD50 and dermal (rabbit) LD50 values have also been reported to be 11.4 gm/kg and >20 ml/kg, respectively. The literature reports three cases of asthmatic symptoms developing in workers due to occupational exposure.

Alumina trihydrate is considered a nuisance particulate which will not cause adverse health effects other than respiratory congestion or irritation.

Neopentyl glycol diglycidyl ether has an acute oral (rat) LD50 value of 2500 mg/kg and dermal (rat) LD50 value of >2,150 mg/kg. This material is moderately irritating to rabbit skin and mildly irritating to rabbit eyes. Neopentyl glycol diglycidyl ether produced dermal sensitization in guinea pigs. Extreme dermal irritation resulted after repeated exposure of 5 days up to 2 years. Neopentyl glycol diglycidyl ether was mutagenic in the Ames test. This material induced base-pair substitution mutations and unscheduled DNA synthesis. Neopentyl glycol diglycidyl ether was inactive in the micronucleus and dominant lethal tests. Neopentyl glycol diglycidyl ether induced skin tumors in mice receiving 1.87 and 3.7 mg per week for 2 years.

Long term overexposure to Kaolin dust may cause lung injury. Overexposure to Kaolin is not likely to cause significant acute toxic effects.

Carbon black has acute oral (rat) and acute dermal (rabbit) LD50 values of >8000 mg/kg and >3000 mg/kg, respectively. The acute 4-hr inhalation LC50 is 67.5 mg/L. Acute overexposure to carbon black dust may cause slight respiratory irritation. Chronic inhalation of carbon black caused lung cancer in rats, but not in mice. Human epidemiology studies have not demonstrated an association to cancer. Carbon black is negative in the Ames mutagenicity tests. The International Agency for Research on Cancer has evaluated carbon black and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Literature reports that Carbon black has shown positive in vivo mutagenic effects in the lung cells of laboratory animals.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

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# 12. ECOLOGICAL INFORMATION

**TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS**

The ecological assessment for this material is based on an evaluation of its components.

**RESULTS OF PBT AND vPvB ASSESSMENT**
Not determined

**HAZARDOUS INGREDIENT TOXICITY DATA**

| Component / CAS No. | Toxicity to Algae | Toxicity to Fish | Toxicity to Water Flea |
|---|---|---|---|
| Reaction product: Bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700) 25068-38-6 | EC50 <10 mg/l - Green Algae (Chlorella pyrenoidosa) | LC50 3.6 mg/l - Rainbow Trout (Oncorhyncus mykiss) (96h) | EC50 2.8 mg/l - Daphnia sp. (Other) (48h) |
| Alumina trihydrate 21645-51-2 | Not available | Not available | Not available |
| Neopentyl glycol diglycidyl ether 17557-23-2 | Not available | Not available | Not available |
| Kaolin 1332-58-7 | Not available | Not available | Not available |
| Carbon black 1333-86-4 | Not available | Not available | Not available |

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# 13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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# 14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

**US DOT**

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN/ID Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

**TRANSPORT CANADA**

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

**ICAO / IATA**

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN Number: UN3082

Transport Label Required: Miscellaneous
Marine Pollutant
Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

Comments: Marine Pollutants-IATA Special Provision A197 when transported in single or combination packagings containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids, are not subject to any provisions of these regulations. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

**IMO**

Dangerous Goods? X
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
UN Number: UN3082
Packing Group: III
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

Comments: Marine Pollutants -IMDG 2.10.2.7 when packaged in single or combination packagings, containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids are not subject to any other provisions of this code. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

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## 15. REGULATORY INFORMATION

**Inventory Information**

**United States (USA):** All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

**Canada:** All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

**European Economic Area (including EU):** Cytec has appointed an Only Representative to relieve our customers from their registration requirements under the REACH Regulation (EC) No. 1907/2006. Please contact us if you wish to benefit from the OR arrangement.

**Australia:** One or more components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by NICNAS.

**China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

**Japan:** All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

**Philippines:** All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

**Taiwan:** All components of this product are included on the Taiwan Chemical Substance Inventory (TCSI) or are not required to be listed on the Taiwan inventory.

**OTHER ENVIRONMENTAL INFORMATION**
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

**PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA**
- Acute

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# 16. OTHER INFORMATION

**NFPA Hazard Rating (National Fire Protection Association)**

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons For Issue:** Revised Section 1

**Date Prepared:** 02/05/2017
**Date of last significant revision:** 02/01/2017

**Component Hazard Phrases**
Reaction product: Bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700)
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H401 - Toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.

Neopentyl glycol diglycidyl ether
- H315 - Causes skin irritation.
- H320 - Causes eye irritation.
- H317 - May cause an allergic skin reaction.

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