



SDS: 0036001
Date Prepared: 12/17/2015

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: CONAPOXY® FR-1810 Part B Hardener
Product Description: Mixture of modified aliphatic amine and fillers
Synonyms: None
Chemical Family: Mixture
Molecular Formula: Mixture
Molecular Weight: Mixture
Intended/Recommended Use: Encapsulant

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, 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 - +61-3-9663-2130 or 1800-033-111 (IXOM)
China (PRC) - +86 0532 83889090 (NRCC)
New Guinea - +61-3-9663-2130 or 1800-033-111
New Zealand - +61-3-9663-2130 or 0800-734-607 (IXOM)
India, Japan, Korea, Malaysia, Thailand - +65 3158 1074 (Carechem24 Singapore)
India (Hindi Speaking Only) - +65 3158 1198 or 000800 100 7479 (Carechem24 Singapore)

Canada: +1-905-356-8310 (Cytec Welland, Canada plant)

Europe/Africa/Middle East (Carechem24 UK):

Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670
(Arabic speaking countries) - +44 (0) 1235 239 671

Latin America:

Brazil - 0800 7077 022 (SUATRANS)
Chile - +56-2-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

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2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive Toxicant Category 2
Skin Corrosion / Irritation Hazard Category 1B
Serious Eye Damage / Eye Irritation Hazard Category 1
Skin Sensitizer Hazard Category 1B
Aquatic Environment Acute Hazard Category 2
Aquatic Environment Chronic Hazard Category 2

LABEL ELEMENTS

**Signal Word**

Danger

Hazard Statements

Suspected of damaging fertility or the unborn child

Causes severe skin burns and eye damage

May cause an allergic skin reaction

Toxic to aquatic life with long lasting effects

Precautionary Statements

Obtain special instructions before use.

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

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash face, hands and any exposed skin thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

Specific treatment (see supplemental first aid instructions on this label).

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Alumina trihydrate 21645-51-2	30 - 50	Not Classified	-
Fatty Acid Compound -	10-30	Eye Dam. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
m-Xylylenediamine 1477-55-0	3-7	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	-

Component / CAS No.	%	GHS Classification	Carcinogen
4-tert-Butylphenol 98-54-4	1 - 5	Repr. 2 (H361) STOT Single 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
Polyethylene polyamine	1-5	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Aliphatic Diamine #2	1-5	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	-

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.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wear impermeable gloves. Wash immediately with plenty of water. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware. Obtain medical attention.

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. Apply artificial respiration if patient is not breathing. Obtain medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Avoid release to the environment. Wash hands thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors or spray mist.

Special Handling Statements: None

STORAGE

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

Storage Temperature: Store at 15 - 25 °C 59 - 77 °F

Reason: Quality.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Utilize a closed system process where feasible. 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:

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing.

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. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

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.

1477-55-0 m-Xylylenediamine

OSHA (PEL):	Not established
ACGIH (TLV):	0.1 mg/m ³ (Ceiling) (skin)
Other Value:	Not established

21645-51-2 Alumina trihydrate

OSHA (PEL):	Not established
ACGIH (TLV):	1 mg/m ³ respirable fraction (TWA)(as Aluminum insoluble compounds)
Other Value:	Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Tan
Appearance:	liquid
Odor:	amine
Boiling Point:	>37.8 °C 100 °F -
Melting Point:	Not available
Vapor Pressure:	Not available
Specific Gravity/Density:	1.55
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	Not available
Volatile Organic Content:	Not available
Flash Point:	>93 °C 200 °F Cleveland Open Cup
Flammability (solid, gas):	Not available
Flammable Limits (% By Vol):	Not available
Autoignition (Self) Temperature:	Not available
Decomposition Temperature:	Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available
Viscosity (Kinematic):	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	Avoid excess heating over long periods of time.
Polymerization:	Will not occur
Conditions To Avoid:	Avoid contact with oxidizing agents. Avoid contact with acids.
Materials To Avoid:	Strong acids and strong oxidizing agents. isocyanates epoxy resins
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO) Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral, Respiratory System.

ACUTE TOXICITY DATA

oral	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	dermal	Corrosive
Acute Irritation	eye	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	dermal	Sensitizing
Sensitization	inhalation	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
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OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

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

The toxicological properties of fatty acid compound have not been fully investigated. This material is expected to cause severe eye irritation.

m-Xylylenediamine has acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values of 930 mg/kg, 2000 mg/kg and 2.4 mg/l, respectively. This material is severely irritating/corrosive to the eyes, skin and mucous membranes. Inhalation of vapor can cause severe irritation/corrosion of the respiratory tract. Ingestion can cause corrosive effects in the mouth, throat, esophagus and stomach. This material has produced skin sensitization in animals.

4-tert-Butylphenol has oral (rat) and dermal (rabbit) LD50 values of > 2000 mg/kg, respectively. The 4-hour inhalation (dust/mist) LC50 value is >5 mg/L. Direct contact with this material may cause moderate skin irritation and severe eye damage. Prolonged or repeated skin contact may result in loss of normal skin pigment. Inhalation of vapors or aerosols may cause irritation to the respiratory tract. This material was not a dermal sensitizer when tested in guinea pigs. 4-tert-Butylphenol is not mutagenic, genotoxic or clastogenic based on results from a battery of in vitro studies. In a sub-chronic toxicity study, with a structurally similar substance, 15 rats/sex/dose in the diet were dosed at levels of 0, 200, 650, 2000 ppm (0, 15, 50, 150 mg/kg bw/day) for (14 weeks). No treatment-related effects on endocrine organs, estrous cycling, or sperm measurements were seen at any dose. Post-mortem measurements indicated a dose-related kidney weight increase in males and a decrease in renal hyaline globules/droplets in males from the 2000 ppm group. The kidney weights showed complete recovery following the 4-week post-dosing recovery period. The NOAEL was established at 50 mg/kg bw/d, based on a small decrease in bodyweight and food consumption in the 2000 ppm group (150 mg/kg bw/d). In a Two-Generation Reproduction Toxicity Study in rats were dosed in the diet at levels of 0, 800, 2500 and 7500 ppm. The No Observed Effect Level (NOEL) was establish to be 800 ppm based on reduced pup weight, increased pup mortality, and findings in the ovary and vagina in the higher dose groups.

Polyethylene polyamine has an estimated acute oral (rat) and dermal (rabbit) LD50 values of >3,500 mg/kg and > 600 mg/kg, respectively. Direct contact with this material may cause severe eye and skin irritation. Repeated skin contact can cause allergic dermatitis. Inhalation overexposure can cause irritation of the upper respiratory tract, nausea, and asthmatic type responses. Literature reports that this material has shown positive in vitro results in mutagenicity tests with and without metabolic activation.

Aliphatic Diamine #2 has an estimated acute oral (rat) LD50 of >300 - 2000 mg/kg. Direct contact with this material causes severe skin burns and serious eye damage. Inhalation exposure to aerosol/vapor may cause respiratory irritation. Prolonged or repeated contact with this substance may cause allergic skin reaction.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

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

Overall Environmental Toxicity: Toxic to aquatic life. Toxic to aquatic life with long lasting 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
Alumina trihydrate 21645-51-2	Not available	Not available	Not available
Fatty Acid Compound -	Not available	Not available	Not available
m-Xylylenediamine 1477-55-0	Not available	Not available	Not available
4-tert-Butylphenol 98-54-4	ErC50 = 14 mg/L - Green Algae (72h); NOEC = 0.32 mg/L EbC50 ~2.4 mg/L - Green Algae (72h); NOEC < 0.32 mg/L	LC50 (semi static) is >1-10 mg/L - Rainbow Trout (96h) 128-Day NOEC (flow-through) for Rainbow Trout for growth rate is 10 ug/L	EC50 ~4.8 mg/L - Daphnia magna (48h) 21-Day NOEC (semi-static) for Daphnia magna reproduction is 0.73 mg/L
Polyethylene polyamine -	Not available	Not available	Not available
Aliphatic Diamine #2 -	Not available	Not available	Not available

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.

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: Corrosive liquid, n.o.s.

Hazard Class: 8

Packing Group: III

UN/ID Number: UN1760

Transport Label Required: Corrosive
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): tetraethylene pentamine, XYLYLENEDIAMINE

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: Corrosive liquid, n.o.s.

Hazard Class: 8

Packing Group: III

UN Number: UN1760

Transport Label Required: Corrosive
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): tetraethylene pentamine, XYLYLENEDIAMINE

ICAO / IATA

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, n.o.s.

Hazard Class: 8

Packing Group: III

UN Number: UN1760

Transport Label Required: Corrosive
Technical Name (N.O.S.): tetraethylene pentamine, XYLYLENEDIAMINE**IMO**

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, n.o.s.

Hazard Class: 8

UN Number: UN1760

Packing Group: III

Transport Label Required: Corrosive
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): tetraethylene pentamine, Xylylenediamine

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: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

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

Japan: One or more components of this product are NOT included on the Japanese (ENCS) 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
- Chronic

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent 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 3
Revised Section 11

Date Prepared: 12/17/2015

Date of last significant revision: 12/17/2015

Component Hazard Phrases

Fatty Acid Compound

H318 - Causes serious eye damage.

H401 - Toxic to aquatic life.

H411 - Toxic to aquatic life with long lasting effects.

m-Xylylenediamine

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H332 - Harmful if inhaled.

H402 - Harmful to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

4-tert-Butylphenol

- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.
- H361 - Suspected of damaging fertility or the unborn child.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

Polyethylene polyamine

- 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.
- H411 - Toxic to aquatic life with long lasting effects.

Aliphatic Diamine #2

- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H317 - May cause an allergic skin reaction.
- H402 - Harmful to aquatic life.
- H412 - Harmful to aquatic life with long lasting effects.

Prepared By: Legal & Compliance Services; E-mail: custinfo@cytec.com

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