

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product Form: Mixture
Product Name: CMF-1 - RESIN
Revision Date: Mar 24, 2016 **Date Printed:** Apr 08, 2016
Version: 2.0 **Supersedes Date:** May 28, 2014
Manufacturer's Name: CITADEL TECHNOLOGIES
Address: 6430 S. 39th West Ave., Tulsa, OK 74132
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Product/Recommended Uses: Epoxy coating and reinforcement for pipe repair

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Irritation - Category 2
Skin Sensitizer - Category 1
Eye Irritation - Category 2

Pictograms:



GHS07

Signal Word:

Warning

Hazardous Statements - Health:

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary Statements - General:

P101 -If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response:

P302 + P352 - IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - SPECIFIC TREATMENT (see First-aid measures on this SDS).

P332 + P313 – IF SKIN IRRITATION OCCURS: Get medical advice/attention.

P337 + P313 – IF EYE IRRITATION PERSISTS: Get medical advice/attention.

P362 + P364 – IF ON CLOTHING: Take off contaminated clothing and wash it before reuse.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

P501 - Dispose of contents/container to disposal recycling center.

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Hazards Not Otherwise Classified (HNOC):

None.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
025085-99-8	Reaction product of epichlorohydrin & bisphenol A	45% - 100%
0068609-97-2	Epoxide resins, liquid	6% - 11%
0112945-52-5	SILICA, AMORPHOUS FUMED	6% - 11%
0028064-14-4	PHENOL, POLYMER WITH FORMALDEHYDE, GLYCIDYL ETH	6% - 11%

SECTION 4) FIRST-AID MEASURES

General:

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell or are concerned.

Eye Contact:

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present, and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use.

Ingestion:

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms and Effects, Both Acute and Delayed:

Overexposure symptoms can include the following: respiratory tract irritation, coughing.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

Not available.

Specific Hazards in Case of Fire:

Burning produces noxious and toxic fumes.

Carbon dioxide, carbon monoxide, aldehydes, phenolics and other organic compounds.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release, if it can be done safely. Move undamaged containers from immediate hazard area, if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA), and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smokes, flares, sparks or flames in immediate area). Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting mixture may be regulated.

Recommended Equipment:

Positive pressure, full-face self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release, if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Contain and collect spilled materials with non-combustible, absorbent material, and place in a container for disposal according to local regulations. Dispose via a licensed waster disposal contractor. Contaminated absorbent material may pose the same physical hazards as the product.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers, and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and boots of chemically impervious materials, such as neoprene or nitrile rubber, is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1,Z2, Z3)	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH Carcinogen
No applicable chemical	-	-	-	-	-	-	-	-	-	-	-	-

Chemical Name	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notifications
No applicable chemical	-	-	-	-	-	-	-

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	5.45 lb/gal
% Solids By Weight	95.43%
Density VOC	0.00 lb/gal
% VOC	0.00%
Specific Gravity	0.65
Appearance	N.A.
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	N.A.
Evaporation Rate	N.A.
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

The product is stable under normal storage conditions.

Conditions to Avoid:

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Masses of more than one pound (0.5 kg) of product, plus an aliphatic amine, will cause irreversible polymerization with considerable heat build-up.

Incompatible Materials:

Incompatible with strong acids or bases, oxidizing agents and selected amines.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, aldehydes and nitrogen oxides.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure:

Inhalation, ingestion, skin absorption

Skin Corrosion/Irritation:

Causes skin irritation

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

May cause an allergic skin reaction

Germ Cell Mutagenicity:

No data available

Carcinogenicity:

No data available

Reproductive Toxicity:

No data available

Specific Target Organ Toxicity - Single Exposure:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

No data available

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

Potential Health Effects - Miscellaneous

0068609-97-2 Epoxide resins, liquid

The following medical conditions may be aggravated by exposure: allergies, eczema, skin disorders. Irritating to the mouth, throat and stomach. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No data available

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

Bio-accumulation potential is moderate

Mobility in Soil:

The product is predicted to have low mobility in soil. (Insoluble in water.)

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS**Waste Disposal:**

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

DO NOT FLUSH TO SEWER, WATERSHED, OR WATERWAY.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION**U.S. DOT Information:**

UN/NA #: Not regulated
 Proper Shipping Name: Not applicable
 Hazard Class: Not applicable
 Packing Group: Not applicable

IMDG Information:

UN/NA #: Not regulated
 Proper Shipping Name: Not applicable
 Hazard Class: Not applicable
 Packing Group: Not applicable
 Marine Pollutant: No data available

IATA Information:

UN/NA #: Not regulated
 Proper Shipping Name: Not applicable
 Hazard Class: Not applicable
 Packing Group: Not applicable

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0028064-14-4	PHENOL, POLYMER WITH FORMALDEHYDE, GLYCIDYL ETH	6% - 11%	SARA312,TSCA,TSCA_UVCB - CHEMICAL SUBSTANCES OF UNKNOWN OR VARIABLE COMPOSITION, COMPLEX REACTION PRODUCTS AND BIOLOGICAL MATERIALS
0068609-97-2	Epoxide resins, liquid	6% - 11%	SARA312,TSCA,TSCA_UVCB - CHEMICAL SUBSTANCES OF UNKNOWN OR VARIABLE COMPOSITION, COMPLEX REACTION PRODUCTS AND BIOLOGICAL MATERIALS
0112945-52-5	SILICA, AMORPHOUS FUMED	6% - 11%	SARA312

SECTION 16) OTHER INFORMATION**Glossary:**

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- ESE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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