

MSDS.597 – CSS EMULSION™ - Low VOC

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Material Safety Data Sheet
 (Date of Revision 11/12.11)

MSDS # 597 CSS EMULSION™ - Low VOC
Product Name: CSS EMULSION

Section: 1 – IDENTIFICATION

Product name: CSS EMULSION™
Product Type: VOC EXEMPT SEALER
For Emergency Medical Assistance:
 Call Health & Safety Information Services: (1-866-303-6949)
For Emergency Transportation Information:
 CHEMTREC US DOMESTIC (800-424-9300)
 CHEMTREC INTERNATIONAL (703-527-3887)
 CANUTEC, CA DOMESTIC (613-996-6666)

Company
 Elite Crete Systems
 1061 transport Drive
 Valparaiso, IN 46383

Section: 2 – HAZARDS IDENTIFICATION

This Product is classified **flammable liquid as defined within OSHA Hazard Communication Standard 29CFR1910.1200**
Classification: Acrylic Sealer/ Carbonic acid dimethyl ester (9CI)
Emergency overview: Clear, colorless liquid with pleasant odor. Highly flammable. Keep container in a well ventilated place. Avoid all ignition sources. No Smoking. Wear eye, skin, and respiratory protection. In case of contact with skin or eyes, rinse with water. Overdose or overexposure should be treated as methanol poisoning. Avoid release to the environment. Readily biological. Not expected to bioaccumulate. Partially water-soluble.
WARNING: Highly Flammable,
 Severe eye irritant, may cause sensitization by skin contact, Inhalation may cause dizziness, headache and incoordination. The solvent(s) in this material can cause the following: moderate skin irritation, irritation of nose and throat, Kidney effects, Liver effects.
Potential acute health effects:
Skin: Effects and may cause skin irritation. Irritation varies from person to person. Defatting and drying of the skin which can lead to irritation and dermatitis
Eyes: Can Cause severe eye irritation, may cause conjunctivitis.
Ingestion: Harmful if swallowed. Could affect central nervous system, blindness and possibly death. Aspiration into lungs may cause lung injury, pulmonary edema (fluid in the lung tissue and air spaces). Pneumonitis (lung inflammation).
Inhalation: Exposure to vapors may cause central nervous system depression. Vapor could irritate nose and throat. Prolonged exposure could be harmful and cause adverse effects including labored breathing and drowsiness, as well as damage to the upper respiratory tract and eyes, dizziness, Unconsciousness, coma and death. Pneumonitis (lung inflammation).
Chronic Effects: Not regulated as a carcinogen. No other chronic health information is available
Carcinogenicity, Mutagenicity, Teratogenicity, Developing effects, Fertility effects, > No critical hazards or significant effects
Over-exposure signs/symptoms
Inhalation: Could cause nervous system depression
Ingestion: Harmful if swallowed see LD50 data
Skin: Adverse symptoms may include the following: pain or irritation, redness
Eyes: Adverse symptoms may include the following: pain watering, redness,
Medical conditions aggravated by over-exposure
 Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product
See section: 11 for more detailed information on health effects and symptoms.

Section: 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS No.</u>	<u>Weight</u>
Dimethyl Carbonate	616-38-6	49-51%
Acrylic polymer(s)	Not hazardous	49-53%
Individual acrylic monomers	Not required	<= 1.0%
Butyl methacrylate	97-88-1	<= 1.5%

Section: 4 – FIRST AID MEASURES

GENERAL IMMEDIATE FIRST AID IS TO WASH, OR FLUSH WITH PLENTY OF CLEAN POTABLE WATER TO EFFECTED PARTS OF BODY

- Inhalation:** Remove victim to fresh air and provide oxygen if breathing is difficult. If fumes still present the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep victim warm and at rest. If not breathing, or if breathing is irregular, or if respiratory arrest occurs provide artificial respiration or oxygen by trained personnel. It may be dangerous to provide mouth to mouth resuscitation. If unconscious get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours or more, consult physician's advice.
- Skin Contact:** Wear protective Gloves at all times. Wash clothing with plenty of water before removing. Remove contaminated clothing/shoes and wipe excess from skin with plenty of clean potable water. Flush skin with clean potable water for at least fifteen minutes. **(Chemical Burns must be treated promptly by a physician)**. In the event of any complaints or symptoms, avoid further exposure. Get medical attention immediately. Show this sheet to doctor. All contaminated clothing including leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.
- Eye Contact:** Flush eyes with plenty of clean potable water for at least 15 minutes while holding eyelids open. Check for and remove any contact lenses. Chemical burns must be treated immediately by a physician. Get medical attention immediately.
- Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious; give small quantities of water to drink. **Stop** if exposed person feels sick as vomiting may be dangerous. Only induce vomiting if directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen all tight clothing, such as a collar, tie, belt, waistband etc.
- Protection of first aid personnel:** No action shall be taken involving any personal risk without suitable training. If it is suspected that fumes are still present; the rescuer should wear an appropriate mask or self-contained breathing apparatus (NIOSH approved). Read all instructions above before taking any action.

NOTES TO PHYSICIAN:

- Symptoms: Irritation as noted above.
 Treatment: Overdose or overexposure to this material should be treated as methanol poisoning since Methanol is expected to be the primary metabolite of this product.

Section: 5 – FIRE FIGHTING MEASURES

- Flammability of Product:** If fire or if heated, Pressure increase will occur and the container may burst. **Flash Point:** >64°F (18°C)
- Flammable Limits in Air:** Not established for this product
- Auto Ignition Temperature:** 856.4 ° F (458° C)
- Extinguishing Media:** Use: alcohol resistant foams, spray fog, CO2, dry chemical or Foam.
- Specific hazards:** This material is highly flammable. Sealed containers can explode in the heat of fire. Vapors may travel to ignition source. Run off may create an explosion, fire and environmental hazard. Toxic vapors may evolve.

Special Firefighting Procedures

This substance is partially water-soluble and therefore the use of water during fire fighting is expected to be relatively effective. Water will dilute the compound, without the formation of an appreciable surface slick, and is not expected to spread flaming.

Special Protective Equipment for Firefighters: Do not enter confined space without full bunker gear helmet with face shield, bunker coats, protective gloves and rubber boots) including a positive pressure (MSHA/ NIOSH) approved or self contained breathing apparatus (SCBA)

Section: 6 – ACCIDENTAL RELEASE MEASURES

Spill/Release and cleanup procedures: In case of spill, evacuate the area and remove all ignition sources. Dike and contain spill with vermiculite, clay-based absorbents, or other absorbent materials such as polyethylene or polypropylene fiber products. Do not discharge the washings and other effluents into ponds, streams, lakes or other water ways. Wear Appropriate respiratory and protective clothing as described in sections 5 & 8 of this MSDS during any cleanup and response activities. In the event of an uncontrolled release of this material, the user should determine if the release is reportable under applicable laws and regulations. If in doubt contact your local authorities. This substance is partially water-soluble and is not expected to form an appreciable surface slick.

Section: 7 – HANDLING AND STORAGE

Precautions to be taken in handling and storage: This material **MUST** be stored in an area free of heat and all ignition sources. Store in a cool dry place. Do not drop. Keep away from fire, heat, open flames, lights, and all other ignition or potential ignition sources. Wear Goggles and gloves when handling. Avoid breathing vapors (wear appropriate respiratory protection gear) as described in other sections of this MSDS. Eye-wash stations and emergency showers need to exist in areas where this material is handled, especially in areas where loading and unloading operations occur. Wash hands thoroughly before and after handling and before eating, drinking, or smoking. Keep out of reach of children. Ground all containers when transferring the material. **CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. FOLLOW ALL MSDS WARNINGS AND LABELING EVEN WHEN EMPTY.** Do not contaminate water, food, feed by storage or disposal. Keep the product in original containers. Store in cool, dry, well ventilated, low fire, heat or spark risk area, and away from direct sunlight. Keep containers closed. Store only in approved containers, under approved conditions. Avoid pressure build-up in containers. An automatic spray device

should be immediately available. A spill control and containment plan should be provided. Storage area should not be subject to rapid temperature changes, as such changes may cause increased internal pressure. Isolate from toxic materials or substances that may release corrosive, toxic, or flammable fumes on reaction.

Section: 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

CONSULT LOCAL AUTHORITIES FOR ACCEPTABLE EXPOSURE LIMITS.

Protective Measures:	Wear appropriate NIOSH approved respirator and protective clothing, including protective chemical goggles, gloves and boots. Facilities storing, utilizing or disposing this material should be equipped with an eyewash facility and a safety shower.
Engineering Controls:	Use EXPLOSION PROOF local exhaust ventilation with a minimum capture velocity of 100 ft/min (0.5m/sec) at the point of vapor evolution. Refer to the current edition of industrial ventilation. A manual of recommended practice published by the American Conference of Government Industrial Hygienists for information on the design, installation, use and maintenance of exhaust systems.
Eye Protection:	Avoid contact with eyes. Wear Chemical goggles when around this product at all times.
Skin & Body Protection:	Avoid prolonged or repeated contact with skin. Wear chemical and solvent-resistant gloves (Nitrile rubber or butyl rubber solvent resistant gloves are a good choice) remove and discard gloves if degradation is observed, wash thoroughly all exposed skin with plenty of soap and water and replace gloves. Wear solvent resistant apron or clothing. Where splashing is possible, an (acid suit) and appropriate solvent and slip resistant boots are required.
Respiratory Protection:	Avoid breathing vapor or mists. Use a properly fitted NIOSH-approved respirator 1910.134 and ANSI Z88.2 or other type of self-contained apparatus as the anticipated exposure levels dictate as required to prevent overexposure. In accordance with 29 CFR 1910.134, use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.

Exposure Limit Guidelines:

Components with workplace control parameters	Regulation	Type of listing	Value
Butyl methacrylate	Rohm & Haas	TWA	50 ppm
Butyl methacrylate	Rohm & Haas	STEL	75 ppm
Dimethyl Carbonate	Rohm & Haas	TWA	10 ppm
Dimethyl Carbonate	Rohm & Haas	Stel	30 ppm

Section: 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Colorless clear liquid with an pleasant odor	Color:	colorless, clear
Flash Point:	>64°F (18°C)	Vapor pressure:	18mm Hg (68°F)
Relative Density:	1.07(water=1)	Solubility in Water:	13.9 g/100 g water
Melting point range:	37°F (3°C)	Odor:	pleasant
% Volatility:	54-57%	Boiling Point range:	194°F (90°C)

Section: 10 – STABILITY & REACTIVITY

Stability:	Product is stable under normal conditions of storage and use. However avoid contact with all ignition sources (e.g. sparks, open flames, heated surfaces etc)
Conditions to avoid:	Heat, fire, open flames, sparks, direct light, all ignition sources, and UV radiation
Materials to avoid:	Reactive or incompatible with the following materials: strong oxidizing agents, strong acids, strong bases
Hazardous Decomposition:	Not expected under normal conditions
Hazardous polymerization:	Under normal conditions, storage and use, Hazardous polymerization will not occur.

Section: 11 – TOXICOLOGICAL INFORMATION

Acute Health Hazard:	BUTYL Methacrylate
Ingestion:	LD50: >2,000 mg/kg OECD Test guideline 401 (species) rat
Inhalation:	LC50: 4 hour ca.29 mg/l OECD test Guideline 403 rat
Acute Dermal:	LD50: > 2,000 mg/kg OECD test guideline 402 rabbit
Eye Irritation/corrosion:	slight eye irritation when tested in rabbits
Irritation/corrosion:	slight Skin irritation.,
Sensitization:	may cause slight sensitization by skin contact varies from person to person
Chronic Health Hazard	the data inconclusive.

Section: 12 – ECOLOGICAL INFORMATION

Summary of ecological data: Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10mg/L in most sensitive species).

Butyl Methacrylate

Elimination information (persistence and degradability)

Biodegradability:	OECD Test Guideline 301C or equivalent readily biodegradable 88% = Readily biodegradable
Bioaccumulation:	Calculated Bioconcentration factor (BCF) 70 Bioconcentration potential is low < 100 or Log Pow <3).
Ecotoxicity effects	
Toxicity to fish	semi-static test LC50 <i>Oryzias latipes</i> (orange-red killfish) 96 hour OECD test guideline 203 or equivalent. = 5.57 mg/L
Toxicity to fish	flow-thru test LC50 <i>Pimephales promelas</i> (fathead Minnow) 96 hour OECD test guideline 203 or equivalent = 11 mg/L
Toxicity to algae	static test LC50 green algae <i>Pseudokirchneriella subcapitata</i> (formerly known as <i>selenastrum capricornutum</i>) 72 hour OECD test Guideline 201 = 31.2 mg/L
Toxicity to aquatic invertebrates	static test EC50 <i>Daphnia magna</i> (water flea) 48 hour OECD test guideline 202 or equivalent 25.4 mg/L

Section 13 – DISPOSAL CONSIDERATIONS

ENVIRONMENTAL PRECAUTIONS: WARNING: KEEP SPILLS AND CLEANING RUNOFFS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER.

RCRA Classification:	If discarded in it's manufactured form, this product is characteristic hazardous waste under RCRA.
WASTE CLASSIFICATION:	40 CFR 261.20- 24- Characteristic Waste D001, 100 lbs.
Physical/Chemical properties:	The computer modeled log K_{ow} was found to be 0.23. The Henry's Law constant is modeled to be $6.2 \times 10^{-4} \text{ atm} \cdot \text{m}^3/\text{mol}$. Partially soluble in water. The compute modeled K_{oc} is predicted to be 8.25.
Contaminated Packaging:	Empty containers should be taken to an approved waste handling site for disposal or recycling.

Section: 14 – TRANSPORTATION INFORMATION

DOT

Proper shipping name:	RESIN SOLUTION
UN number	UN 1866
Class	3
Packing group	II

Classification for SEA transport (IMO-IMDG):

Proper shipping name	RESIN SOLUTION
UN number	UN1866
Class	3
Packing group	II

Section: 15 – REGULATORY INFORMATION

Workplace Classification:	
WHMIS:	This product is a 'controlled product' under Canadian Workplace Hazardous Materials Information System (WHMIS)
CERCLA Information (40CFR302.4)	This material has a reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. The material's hazardous waste number and reportable quantity is listed below. Releases of this material in excess of its reportable quantity must be reported to the National response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.
Methyl methacrylate	80-62-6 1000 lbs. RQ
UNITED STATES TSCA Inventory (US TSCA):	
All components of this product are in compliance with the inventory listing requirements of the US Toxic Substances Control Act (TSCA) Chemical Substance Inventory.	

Section: 16 – OTHER INFORMATION

The Information provided in this safety data sheet is correct to the best of our knowledge. Information and belief at the date of its publication. The information given is designed only As a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warrantee or quality specification. The information relates only to the specific material designated and may not be valid for such material used in conjunction in combination
With any other materials or in any process unless specified in the text.

Reference:	Prepared in accordance with 29 CFR 1910.1200 By Elite Crete Systems, R & D lab
Health:	1
Flammability:	3
Physical Hazard:	1