



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) 1907/2006.

Version: 2.0

Revision Date: August 1, 2018

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SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

1.1. Product identifier:

Product ID: CSC-600/602/A (Part A Epoxy Resin)

Product name: Standard Temperature Contour (Part A Epoxy Resin)

1.2. Recommended uses of the mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Clock Spring Company L.P.

621 Lockhaven Drive

Houston, TX 77073

281-590-8491

1.4. Emergency telephone number

800-424-9300 Intl: 703-527-3887

Chemtrec Contract # 5043

SECTION 2) HAZARDS IDENTIFICATION

2.2 Label elements.

Labeling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



Signal Word:

Danger

Hazardous Statements - Health:

H319 Causes serious eye irritation

H315 Causes skin irritation

H317 May cause an allergic skin reaction

Hazardous Statements - Environmental:

H411 Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention:

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response:

P501 Collect spillage.

P321 Specific treatment (see First-aid on this label).

P362 + P364 Take off contaminated clothing. And wash it before reuse.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	CAS No.	EC No.	INDEX No.	REACH Registration No.	% [weight]	Classification according to Regulation (EC) No 1278/2008 (CLP). CLP	specific concentration limit for CLP classification
BISPHENOL A DIGLYCIDYL ETHER POLYMER	25068-38-6	500-033-5	603-074-00-8	01-2119456619-26-XXXX	60-100%	Aquatic Chronic 2, H411 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315 - Skin Sens. 1, H317	Eye Irrit. 2, H319: C ≥ 5 % Skin Irrit. 2, H315: C ≥ 5 %
BUTANE, 1,4-BIS(2,3-EPOXYPROPOXY)	2425-79-8	219-371-7	603-072-00-7	01-2119494060-45-XXXX	40%	Acute Tox. 4 *, H312 - Acute Tox. 4 *, H332 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315 - Skin Sens. 1, H317	-
Methanol	67-56-1	200-659-6	603-001-00- X	01-2119433307-44-XXXX	<0.01%	Acute Tox. 3 *, H311 - Acute Tox. 3 *, H331 - Acute Tox. 3 *, H301 - Flam. Liq. 2, H225 - STOT SE 1, H370 **	STOT SE 1, H370: C ≥ 10 % STOT SE 2, H371: 3 % ≤ C < 10 %

SECTION 4) FIRST-AID MEASURES

4.1 Description of first aid measures.

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin Contact:

Take off contaminated clothing, shoes and leather goods: Get medical advice/attention. Wash contaminated clothing before re-use.

Eye Contact:

Remove source of exposure or move person to fresh air. 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. If eye irritation persists: Get medical advice/attention.

Ingestion:

Rinse mouth. Get medical attention/advice if you feel unwell. Do NOT induce vomiting unless directed by the poison control center or doctor.

4.2 Most important symptoms and effects, both acute and delayed.

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate. It may cause an allergic reaction, dermatitis, redness or inflammation of the skin.

4.3 Indication of any immediate medical attention and special treatment needed.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

SECTION 5) FIRE-FIGHTING MEASURES

The product does not present any particular risk in case of fire.

5.1. Extinguishing media:

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:

High pressure water jet, Water may cause frothing. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2. Special hazards arising from the mixture:

Specific Hazards in Case of Fire:

Hazardous decomposition products formed under fire conditions. Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to

health.

5.3. Advice for firefighters:

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. Water may be ineffective but can be used to cool containers exposed to heat or flame. 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

6.1 Personal precautions, protective equipment and emergency procedures.

For exposure control and individual protection measures, see section 8.

Emergency Procedure:

Cover the liquid with inert absorbent. Scoop all contaminated material into containers for proper disposal. Flush area with water to remove residues.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Do not touch or walk through spilled material.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Recommended Equipment:

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

6.2. 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.

6.3 Methods and material for containment and cleaning up.

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

SECTION 7) HANDLING AND STORAGE

7.1. Precautions for safe handling:

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 process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

7.2. Conditions for safe storage, including any incompatibilities

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.

Do not cut, drill, grind, weld or perform similar operations on or near containers.

Crystalline silica may be generated when machining cured products. Overexposure may create possible cancer and silicosis hazard.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

Not available.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	OSHA A TWA (ppm)	OSHA A TW A (mg/m ³)	OSHA A STE L (ppm)	OSHA A STE L (mg/m ³)	OSHA- Table s- Z1,2, 3	OSHA Carcinog en	OSHA Skin designatio n	NIOSH TWA (ppm)	NIOSH H TWA (mg/m ³)	NIOSH H STE L (ppm)	NIOSH H STE L (mg/m ³)	NIOSH Carcino gen
METHANOL	200	260			1			200	260	250	325	
METHANOL (EU)	200	260										

METHANOL. DNEL for general population: inhalation long-term, local effects: 50 mg/m³.
dermal, acute, systemic effects: 8 mg/kg bw/day)

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m ³)	ACGIH STEL (ppm)	ACGIH STEL (mg/m ³)	ACGIH Carcinogen	ACGIH Notations	ACGIH TLV Basis
METHANOL	200	262	250	328		Skin; BEI	Headache, eye dam

8.2. Exposure controls:

Follow established company guidelines

Appropriate Engineering Controls:

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

Eye Protection:

Wear eye protection with side shields or goggles «CE» marking, category II. Face and eye protector against splashing liquid. CEN standards EN 165, EN 166, EN 167, EN 168 should be used. 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, hands and body Protection:

Use protective clothing and work footwear.

Use of gloves approved by CE category II 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. Chemical-resistant clothing is recommended to avoid prolonged contact. Avoid unnecessary skin contact.

Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact.

The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.

STANDARDS. For cloths: EN-340. Footwear: EN ISO 13287, EN 20347.

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. CEN standards: EN 136, EN 140, EN 405.

Use NIOSH approved organic vapor cartridge respirator when vapor mist exposure is likely.

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic Physical and Chemical Properties:

% Solids By Weight	99.30%
% VOC	0.70%
VOC Actual	8.06 g/l
Specific Gravity	1.16
Appearance	Clear Liquid
Odor Description	N/A
pH	N/A
Flash Point	N/A
Flammability	N/A
Boiling Point	N/A
Evaporation Rate	<1 (Butyl Acetate = 1)
Water Solubility	Negligible
Vapor Density	>1 (Air = 1)
Vapor Pressure	Negligible
Auto Ignition Temp	N/A

9.2. Other information

Not relevant.

SECTION 10) STABILITY AND REACTIVITY

10.1. Reactivity:

The product does not present hazards by their reactivity.

10.2. Chemical Stability:

Stable at normal temperature and pressure.

Unstable in contact with acids, bases and oxidizing agents.

10.3 Possibility of hazardous reactions.

No data available.

Hazardous Polymerization:

No data available.

10.4. Conditions to Avoid:

Avoid contact with heat, flame, spark and other igniter. Avoid radical forming substances (metal-ions, peroxides). Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers.

10.5. Incompatible materials

Materials to Avoid:

Avoid oxidizing agents, acids and bases.

10.6. Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide and various hydrocarbons upon thermal decomposition.

SECTION 11) TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects.

General:

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Splatters in the eyes can cause irritation and reversible damage.

Acute Toxicity:

Ingestion: May cause gastrointestinal disturbances such as nausea, vomiting, diarrhea and effects similar to those described in inhalation.

Aspiration of this product into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury.

Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Dermal) = 2.750 mg/kg

Aspiration Hazard:

No Data Available

Carcinogenicity:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Respiratory/Skin Sensitization:

Product classified: Skin sensitizer, Category 1: May cause an allergic skin reaction

Serious Eye Damage/Irritation:

Causes serious eye irritation

Product classified:

Eye irritation, Category 2: Causes serious eye irritation.

Skin Corrosion/Irritation:

Causes skin irritation Product classified:

Skin irritant, Category 2: Causes skin irritation.

0000067-56-1 METHANOL

LC50 (rat): 64000 ppm (4-hour exposure) (14, unconfirmed)

LD50 (oral, rat): 5628 mg/kg (14, unconfirmed)

LD50 (oral, 14-day old rat): 5850 mg/kg (cited as 7.4 mL/kg) (15)

LD50 (oral, young adult rat): 10280 mg/kg (cited as 13.0 mL/kg) (15)

LD50 (oral, monkey): 3000 mg/kg (1/1 animal died) (16) LD50 (dermal, rabbit): 15800 mg/kg (cited as 20 mL/kg) (17 citing unpublished information)

LD50 (dermal, rabbit): 15800 mg/kg.

Potential Health Effects - Miscellaneous

0000067-56-1 METHANOL

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, kidneys, liver, skin. Excessive human exposure to methanol may lead to: fatigue, headache, anesthetic, neurologic effects, and visual difficulties including blindness or death. Recurrent overexposure may result in liver and kidney injury. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. Ingestion may cause any of the following: blindness. Eye contact may cause any of the following: conjunctivitis, mild irritation, corneal opacity.

0025068-38-6 BISPHENOL A DIGLYCIDYL ETHER POLYMER

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs.

SECTION 12) ECOLOGICAL INFORMATION

12.1 Toxicity.

Name	Ecotoxicity			
	Type	Test	Kind	Value
methanol CAS No: 67-56-1 EC No: 200-659-6	Fish	LC50	Trachinotus carolinus	10112 mg/L (24 h) [1] [1] Baltz, D. M. et al., Transactions of the American Fisheries Society 134: 730-740, 2005
	Aquatic invertebrates	EC50	Daphnia magna	20803 mg/L (24 h) [1] [1] Environmental Toxicology and Chemistry 14(12): 2085-2088, 1995
	Aquatic plants	EC50	Selenastrum capricornutum	22000 mg/L (96 h) [1] [1] Ecotoxicology and Environmental Safety 71: 166-1711, 2008

12.2 Persistence and degradability.

There is no information available on the degradability of the substances present.

No information is available regarding the degradability of the substances present. No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potential.

Information about the bioaccumulation of the substances present.

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
methanol N. CAS: 67-56-1 : 200-659-6	-0,74	-	-	Very low

12.4 Mobility in soil.

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste disposal:

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

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14) TRANSPORT INFORMATION

14.1 UN number.

UN No: UN3082

14.2 UN proper shipping name.

Description:

ADR: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700), REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN)), 9, PG III

IMDG: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700), REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN)), 9, PG III, MARINE POLLUTANT

ICAO/IATA: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700), REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN)), 9, PG III

14.3 Transport hazard class(es).

Class(es): 9

14.4 Packing group.

Packing group: III

14.5 Environmental hazards.

Marine pollutant: Yes

Dangerous for the environment

14.6 Special precautions for user.

Labels: 9

Hazard number: 90

ADR LQ: 5 L

IMDG LQ: 5 L ICAO LQ: 30 kg B

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.

The product is not transported in bulk.

SECTION 15) REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation for the mixture

EU REGULATIONS:

- Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the
- Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), according to Annex II.
- Regulation (EC) 1272/2008 on the classification, labeling and packaging of substances and mixtures (CLP
- Regulation)
- Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.
- Directive (EC) 98/2008 on waste
- ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

Restrictions of occupation

Exposure limit values: GESTIS INTERNATIONAL LIMIT VALUES, by IFRA Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung.

AGENCIES:

ECHA: European Chemicals Agency.

15.2. Chemical safety assessment

NA

SECTION 16) OTHER INFORMATION

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

BCF: Bioconcentration factor.

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
EC50: Half maximal effective concentration.
PPE: Personal protection equipment.
IATA: International Air Transport Association.
ICAO: International Civil Aviation Organization.
IMDG: International Maritime Code for Dangerous Goods.
LC50: Lethal concentration, 50%.
LD50: Lethal dose, 50%.
Log Pow: Logarithm of the partition octanol-water.
NOEC: No observed effect concentration.
PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

DISCLAIMER

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