SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
- Trade name or designation of the mixture: Crystal Sheen-Resin
- Registration number: None.
- Synonyms: 02208
- SDS number: 02208, 02216, 02232, 02264, 02228, 02228R, 02211, 22218, 01491, 02228R, 22218X.
- Product code: 21-March-2016
- Issue date: 01
- Version number: -
- Supersedes date: -

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Identified uses: High Gloss Coating
- Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet
- Manufacturer
  - Company name: Environmental Technology, Inc.
  - Address: 300 S. Bay Depot Road
  - Fields Landing
  - CA 95537, USA.
  - Telephone number: 001 707-443-9323
  - E-mail: eti@eti-usa.com
  - Contact person: Technical Director
- Supplier
  - Company name
  - Address

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards
- Skin corrosion/irritation:Category 2
- Serious eye damage/eye irritation:Category 2
- Skin sensitisation: Category 1

Environmental hazards
- Hazardous to the aquatic environment, long-term aquatic hazard: Category 2

Hazard summary
Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Dangerous for the environment if discharged into watercourses.

2.2. Label elements
Contains: Oxirane, Mono[(C12-14-alkyloxy)methyl] derivs., Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)

Hazard pictograms

Signal word Warning

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention
P261 Avoid breathing mist or vapour.
P280 Wear protective gloves/eye protection/face protection.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.

Response
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage Store away from incompatible materials.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information
None.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)</td>
<td>60-99</td>
<td>25068-38-6</td>
<td>-</td>
<td>603-074-00-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>500-033-5</td>
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<td></td>
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</tr>
<tr>
<td>Classification:</td>
<td>Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxirane, Mono[(C12-14-alkyloxy)methyl] derivs.</td>
<td>&lt;15</td>
<td>68609-97-2</td>
<td>-</td>
<td>603-103-00-4</td>
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<td></td>
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<td>271-846-8</td>
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</tr>
<tr>
<td>Classification:</td>
<td>Skin Irrit. 2;H315, Skin Sens. 1;H317</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Composition comments The full text for all H-statements is displayed in section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist. Get medical attention if any discomfort continues.
Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed: Contact may produce eye irritation with associated redness, swelling, tears and pain. Contact causes skin irritation. May cause sensitisation by skin contact. Symptoms include redness, itching and pain. Rash. Dermatitis.

4.3. Indication of any immediate medical attention and special treatment needed: Exposure may aggravate pre-existing skin disorders. Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards: No unusual fire or explosion hazards noted.


5.2. Special hazards arising from the substance or mixture: During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Avoid contact with skin and eyes. Avoid inhalation of vapours or mists. Ensure adequate ventilation. Wear protective clothing as described in section 8 of this safety data sheet. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.

6.2. Environmental precautions: Avoid discharge into drains, water courses or onto the ground. Avoid discharge into storm drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up: Keep unnecessary personnel away. This product is miscible in water. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

6.4. Reference to other sections: For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling: Keep out of reach of children. Avoid breathing mists or vapours. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities: Store away from incompatible materials (see section 10 of the SDS). Store in tightly closed original container in a dry, cool and well-ventilated place. Read and follow manufacturer's recommendations.

7.3. Specific end use(s): High Gloss Coating

SECTION 8: Exposure controls/personal protection

8.1. Control parameters: No exposure limits noted for ingredient(s).

8.2. Biological limit values: No biological exposure limits noted for the ingredient(s).

8.3. Recommended monitoring procedures: Follow standard monitoring procedures.
Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines No exposure standards allocated. Use personal protective equipment as required. Keep working clothes separately.

8.2. Exposure controls
Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment
General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection Wear safety glasses with side shields (or goggles).
Skin protection
- Hand protection Chemical resistant gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
- Other Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.
Respiratory protection No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Wash at the end of each work shift and before eating, smoking or using the toilet.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Apparance Viscous liquid.
Physical state Liquid.
Form Liquid.
Colour Clear.
Odour Minimal. Not distinct.
Odour threshold Not available.
pH Not available.
Melting point/freezing point Not available.
Initial boiling point and boiling range $176.67 ^\circ C (350 ^\circ F)$
Flash point $160.0 ^\circ C (320.0 ^\circ F)$ Setaflash Seta closed cup
Evaporation rate Not available.
Flammability (solid, gas) Not applicable.
Upper/lower flammability or explosive limits
Flammability limit - lower (%) Not available.
Flammability limit - upper (%) Not available.
Vapour pressure < 1.33 hPa
Vapour density Not available.
Relative density 1.15
Solubility(ies) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

9.2. Other information
Percent volatile: 0 % (VOC)
Wetted Zone: estimated

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions
Hazardous polymerisation does not occur.

10.4. Conditions to avoid
Contact with incompatible materials. High temperatures. Heating this resin above 300°F in the presence of air may cause slow oxidative decomposition.

10.5. Incompatible materials
Strong oxidising agents. Reacts violently with strong acids. Reacts violently with strong bases. Avoid contact with water and liquids. Do not allow molten product to contact water or other liquids. This can cause violent reactions.

10.6. Hazardous decomposition products
None expected under normal conditions of use.

SECTION 11: Toxicological information

General information
Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure
Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Inhalation of vapours or mists of the product may be irritating to the respiratory system.

Skin contact
Causes skin irritation. May cause sensitisation by skin contact.

Eye contact
Causes serious eye irritation.

Ingestion
Under normal conditions of intended use, this material does not pose a risk to health.

Contact may produce eye irritation with associated redness, swelling, tears and pain. Causes skin irritation. May cause sensitisation by skin contact. Symptoms include redness, itching and pain. Rash. Dermatitis.

11.1. Information on toxicological effects
Acute toxicity
Not expected to be a hazard under normal conditions of intended use.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
May cause sensitisation by skin contact.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Resins of this type, liquid resins based on BisPhenolA/Epichlorohydrin (Epoxy Resin), have proved to be inactive when tested by in vivo mutagenicity assays.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Due to the high viscosity the product is not an aspiration hazard.

Mixture versus substance information
No information available.

Other information
Prolonged exposure may cause chronic effects.

SECTION 12: Ecological information

12.1. Toxicity
Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability
No data is available on the degradability of this product.

12.3. Bioaccumulative potential
No data available on bioaccumulation.
Partition coefficient
n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN3082
14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)
   Class 9
   Subsidiary risk -
   Label(s) 9
   Hazard No. (ADR) Not available.
   Tunnel restriction code Not available.
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN3082
14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)
   Class 9
   Subsidiary risk -
   Label(s) 9
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number UN3082
14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)
   Class 9
   Subsidiary risk -
   Label(s) 9
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
IATA

14.1. UN number UN3082
14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), Yes)
14.3. Transport hazard class(es)
   Class 9
   Subsidiary risk -
   Label(s) 9
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number UN3082
14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)
   Class 9
   Subsidiary risk -
   Label(s) 9
14.4. Packing group III
14.5. Environmental hazards Marine pollutant Yes
14.6. Special precautions for user Not available.
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
  Not listed.
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
  Not listed.

Authorisations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
  Not listed.

Restrictions on use

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended
  Not listed.
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
  Not listed.
Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (CAS 25068-38-6)

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended**
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (CAS 25068-38-6)

**Directive 94/33/EC on the protection of young people at work, as amended**
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (CAS 25068-38-6)

Other regulations
The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations
Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**
Not available.

**References**
Not available.

**Information on evaluation method leading to the classification of mixture**
The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any H-statements not written out in full under Sections 2 to 15**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

**Training information**
Follow training instructions when handling this material.

**Disclaimer**
The information in the sheet was written based on the best knowledge and experience currently available.