

SAFETY DATA SHEET

1. Identification

Product identifier	Crystal Sheen - Hardener		
Other means of identification			
SDS number			
Product code	02208, 02216, 02232, 02264, 02228, 02228R, 02211, 22218, 01491, 02228R, 22218X.		
Recommended use	High Gloss Coating		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Company name	Environmental Technology, Inc.		
Address	300 S. Bay Depot Road Fields Landing CA 95537		
Telephone	Telephone number	707-443-9323	
E-mail	mail@eti-usa.com		
Contact person	Technical Director		
Emergency phone number	CHEMTREC	800-424-9300	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Reproductive toxicity (fertility, the unborn child)	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility. Suspected of damaging the unborn child.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection.
Response	If swallowed: Rinse mouth. Do not induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/. Specific treatment (see this label).
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Nonyl Phenol Compound	Proprietary	>30
Polyoxypropylene Amine Compound	Proprietary	<40
Amino Piperazine Compound	Proprietary	<25
Butanol Compound	Proprietary	<10

Composition comments The identities of the materials in this product are withheld as a trade secret (29CFR1910.1210(i)) and are available to a physician or paramedical personnel in a emergency situation.

4. First-aid measures

Inhalation	If inhaled, remove to fresh air. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.
Skin contact	Wash contaminated clothing before reuse. Rinse skin thoroughly with lukewarm water for at least 15 minutes. Call a physician or poison control center immediately.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a physician or Poison Control Center immediately.
Most important symptoms/effects, acute and delayed	Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. May cause an allergic skin reaction. Dermatitis. Rash. Contact can cause corrosive burns, corneal damage, and blindness. Itching, redness, swelling, burning or blistering of skin.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing skin disorders. Treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move container from fire area if it can be done without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Do not breathe mist or vapor. Avoid contact with skin and eyes. Keep unnecessary personnel away. Keep out of low areas. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials 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. Absorb in vermiculite, dry sand or earth and place into containers. Collect and dispose of spillage as indicated in section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Never return spills to original containers for re-use. Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get this material in your eyes, on your skin, or on your clothing. Avoid contact during pregnancy/while nursing. Provide adequate ventilation. Use personal protective equipment as required. Wash contaminated clothing before reuse. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Avoid prolonged exposure. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Keep out of the reach of children. Store locked up. Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials, see Section 10 of the SDS.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Butanol Compound (CAS Proprietary)	PEL	450 mg/m ³
		150 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butanol Compound (CAS Proprietary)	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butanol Compound (CAS Proprietary)	STEL	455 mg/m ³
		150 ppm
		TWA

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

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

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

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.

Respiratory protection

If ventilation is insufficient, suitable respiratory protection must be provided.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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 and using the toilet.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Liquid. Viscous liquid.

Color

Clear.

Odor	Minimal. Not distinct.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	400 °F (204.44 °C)
Flash point	200.0 °F (93.3 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	> 1
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Slightly Soluble (0.1-1%)
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport. Read and follow manufacturer's recommendations.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Contact with incompatible materials. Avoid incompatible materials and intense heat.
Incompatible materials	Acids. Strong oxidizing agents. Oxidizing agents.
Hazardous decomposition products	None expected under normal conditions of use.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. May be harmful in contact with skin. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Harmful if swallowed. May cause an allergic skin reaction. May cause irritation to the respiratory system.

Components	Species	Test Results
Amino Piperazine Compound (CAS Proprietary)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	880 mg/kg
Butanol Compound (CAS Proprietary)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	2193 mg/kg
Skin corrosion/irritation	Causes severe skin burns.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	Possible reproductive hazard. Suspected of damaging the unborn child. Suspected of damaging fertility.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity Expected to be very toxic to aquatic organisms. May cause long-term adverse effects in the environment.

Components	Species	Test Results
Amino Piperazine Compound (CAS Proprietary)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 1950 - 2460 mg/l, 96 hours
Nonyl Phenol Compound (CAS Proprietary)		
Aquatic		
Crustacea	EC50	Clam (<i>Mulinia lateralis</i>) 0.0379 mg/l, 48 hours
Fish	LC50	Winter flounder (<i>Pleuronectes americanus</i>) 0.017 mg/l, 96 hours
Polyoxypropylene Amine Compound (CAS Proprietary)		
Aquatic		
<i>Chronic</i>		
Algae	NOEC	Algae 0.32 mg/l, 72 hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available on bioaccumulation.	
Partition coefficient n-octanol / water (log Kow)		
Butanol Compound (CAS Proprietary)	0.61	

Mobility in soil No data available.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Dispose in accordance with applicable federal, state, and local regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

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

Waste from residues / unused products 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). Do not allow this material to drain into sewers/water supplies.

Contaminated packaging Dispose in accordance with applicable federal, state, and local regulations.

14. Transport information

DOT

UN number UN1760

UN proper shipping name Corrosive liquids, n.o.s.

Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Packing group III

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB3, T7, TP1, TP28

Packaging exceptions 154

Packaging non bulk 203

Packaging bulk 241

IATA

UN number UN1760

UN proper shipping name Corrosive liquids, n.o.s.

Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Packing group III

Packaging exceptions: 2.7.2.1

Environmental hazards Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1760

UN proper shipping name Corrosive liquids, n.o.s.

Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Packing group III

Special provisions: 223, 274

Packing exceptions: 3.4.1

Environmental hazards

Marine pollutant Yes

EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butanol Compound (CAS Proprietary) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Butanol Compound	Proprietary	<10

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**Amino Piperazine Compound (CAS Proprietary)
Butanol Compound (CAS Proprietary)**US. New Jersey Worker and Community Right-to-Know Act**Amino Piperazine Compound (CAS Proprietary)
Butanol Compound (CAS Proprietary)**US. Pennsylvania Worker and Community Right-to-Know Law**Amino Piperazine Compound (CAS Proprietary)
Butanol Compound (CAS Proprietary)**US. Rhode Island RTK**

Butanol Compound (CAS Proprietary)

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 21-July-2014

Revision date -

Version # 01

HMIS® ratings Health: 3*
Flammability: 0
Physical hazard: 0

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