

SAFETY DATA SHEET

1. Identification

Product identifier EX-74 Hardener
Other means of identification
SDS number 23500H
Product code 12025, 23500, 23500C.
Recommended use High Gloss Coating
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

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 mail@eti-usa.com
Contact person Technical Director
Emergency phone number 800-424-9300 (CHEMTREC)

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards
Acute toxicity, oral Category 4
Acute toxicity, dermal 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. Harmful in contact with skin. 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. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
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. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.
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.

Supplemental information None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine	Proprietary	10-50
Nonyl phenol	Proprietary	10-50
Trimethylolpropane poly(oxypropylene)triamine	Proprietary	10-50

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The manufacturer has claimed the exact percentage as trade secret under the OSHA Hazard Communication Standard.

4. First-aid measures

Inhalation If inhaled, remove to fresh air. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.

Skin contact Remove contaminated clothing. Rinse skin thoroughly with lukewarm water for at least 15 minutes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

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. Never give anything by mouth to a victim who is unconscious or is having convulsions.

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 IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Alcohol resistant 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, hazardous combustion products are released that may include: Carbon oxides (CO_x). Nitrogen Oxides (NO_x).

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 In case of fire do not breathe fumes. 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 Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not get in eyes, on skin or on clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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	Keep out of reach of children. 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. Do not taste or swallow. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Use personal protective equipment as required. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Observe good industrial hygiene practices.
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	No exposure limits noted for ingredient(s).
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 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) and a face shield.
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.
Skin protection	
Other	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	Viscous liquid.
Physical state	Liquid.
Form	Pourable liquid.
Color	Clear. Slight yellow.
Odor	Slight ammonia odor.
Odor threshold	Not available.
pH	Not available
Melting point/freezing point	Not available.
Initial boiling point and boiling range	222 °F (105.6 °C)
Flash point	212.0 °F (100.0 °C) Pensky-Martens 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 mm Hg at 68 F
Vapor density	Not available
Relative density	0.972 g/cm ³
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	1400 cP (77 °F (25 °C))
Other information	
Density	8.00 lbs/gal
VOC	0 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid incompatible materials and intense heat. When product is mixed with Part A and left in a large mass a vigorous exothermic reaction may occur, and may result in charring of the reactants. Read and follow all instructions. Do not add nitrites, may form suspected cancer causing nitrosamines.
Incompatible materials	Acids. Strong oxidizing agents. Alkaline metals. Peroxides. Phenols.
Hazardous decomposition products	None expected under normal conditions of use.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard. When heated, the vapors/fumes given off may cause respiratory tract irritation.
Skin contact	Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Under normal conditions of intended use, this material does not pose a risk to health. Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	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.
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Information on toxicological effects

Acute toxicity	Harmful if swallowed. Harmful in contact with skin.
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Components	Species	Test Results
3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine (CAS Proprietary)		
Acute		
Oral		
LD50	Rat	1030 mg/kg
Nonyl phenol (CAS Proprietary)		
Acute		
Dermal		
LD50	Rabbit	2031 mg/kg
Oral		
LD50	Rat	1200 mg/kg
Trimethylolpropane poly(oxypropylene)triamine (CAS Proprietary)		
Acute		
Dermal		
LD50	Rabbit	610 mg/kg
Oral		
LD50	Rat	220 mg/kg
Skin corrosion/irritation	Causes 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.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
NTP Report on Carcinogens		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	Possible reproductive hazard. Possible risk of harm to the unborn child. Possible risk of impaired fertility.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Due to the high viscosity the product is not an aspiration hazard.	
Chronic effects	Prolonged exposure may cause chronic effects. Possible adverse reproductive and developmental effects.	

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
3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine (CAS Proprietary)		
Aquatic		
<i>Acute</i>		
Algae	EC50	Scenedesmus subspicatus > 50 mg/l, 72 hours
Crustacea	EC50	Daphnia magna 23 mg/l, 48 hours
Fish	LC50	Leuciscus idus 110 mg/l, 96 hours

Components		Species	Test Results
<i>Chronic</i>			
Algae	EC50	Scenedesmus subspicatus	11 mg/l, 72 hours
Crustacea	NOEC	Daphnia magna	3 mg/l, 21 days
Nonyl phenol (CAS Proprietary)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Scenedesmus subspicatus	1.3 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	0.085 mg/l, 48 Hours
Fish	LC50	Pimephales promelas	0.128 mg/l, 96 Hours
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	24 µg/l, 21 days
Fish	NOEC	Pimephales promelas	0.0074 mg/l, 33 days

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

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Nonyl phenol 5.71

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. Do not allow this material to drain into sewers/water supplies.

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).

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. (Nonyl Phenol Mixture)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
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. (Nonyl Phenol Mixture)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
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. (Nonyl Phenol Mixture)
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group III
Environmental hazards
Marine pollutant Yes
EmS Not available.
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 Not applicable.

15. Regulatory information

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

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

Nonyl phenol (CAS Proprietary) 1.0 % One-Time Export Notification only.

TSCA Chemical Action Plans, Chemicals of Concern

Nonyl phenol (CAS Proprietary) Nonylphenol (NP) and Nonylphenol Ethoxylates (NPEs) Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Reproductive toxicity

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Nonyl phenol	Proprietary	10-50

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**

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine (CAS Proprietary)
 Nonyl phenol (CAS Proprietary)

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

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)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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 17-April-2014

Revision date 22-July-2019

Version # 02

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

List of abbreviations LD50: Lethal Dose 50%.
 LC50: Lethal Concentration 50%.
 EC50: Effective Concentration, 50%.
 NOAEC: No Observed Adverse Effect Concentration.
 PEL: Permissible Exposure Limit.
 STEL: Short-term Exposure Limit.
 TWA: Time Weighted Average Value.

References ACGIH
 EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents
 HSDB® - Hazardous Substances Data Bank
 IARC Monographs. Overall Evaluation of Carcinogenicity
 National Toxicology Program (NTP) Report on Carcinogens
 ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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