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 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

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 vapour. 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 should 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. 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 CENTRE/doctor. Wash contaminated clothing before reuse.
Storage  Store locked up.
Disposal  Dispose of contents/container in accordance with local/regional/national/international regulations.
3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine</td>
<td></td>
<td>2855-13-2</td>
<td>10-30% wt/wt</td>
</tr>
<tr>
<td>Nonyl phenol</td>
<td></td>
<td>84852-15-3</td>
<td>45-70 % wt/wt</td>
</tr>
<tr>
<td>Trimethylolpropane poly(oxypropylene)triamine</td>
<td></td>
<td>39423-51-3</td>
<td>30-60 % wt/wt</td>
</tr>
</tbody>
</table>

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The exact concentrations of the above listed chemicals are being withheld as a trade secret.

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 centre 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 centre 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 Centre 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 (COx). Nitrogen Oxides (NOx).

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 vapour. 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.

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 vapour. 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
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.

Hand 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 or using the toilet.

9. Physical and chemical properties

Appearance
Viscous liquid.

Physical state
Liquid.

Form
Pourable liquid.

Colour
Clear. Slight yellow.

Odour
Slight ammonia odor.

Odour threshold
Not available.

pH
Not available

Melting point/freezing point
Not available.

Initial boiling point and boiling range
105.6 °C (222 °F)

Flash point
100.0 °C (212.0 °F) Pensky-Martens Closed Cup

Evaporation rate
Not available.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit – upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 1 mm Hg at 68 F</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.972 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Slightly Soluble (0.1-1%)</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1400 cP (25 °C (77 °F))</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>8.00 lbs/gal</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidising</td>
</tr>
<tr>
<td>VOC</td>
<td>0 g/l</td>
</tr>
</tbody>
</table>

### 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 polymerisation 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 nitrates, may form suspected cancer causing nitrosamines.

**Incompatible materials**

**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 vapours/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.

#### Information on toxicological effects

**Acute toxicity**
Harmful if swallowed. Harmful in contact with skin.
### Components Test Results

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine (CAS 2855-13-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>1030 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nonyl phenol (CAS 84852-15-3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>2031 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>1200 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trimethylolpropane poly(oxypropylene)triamine (CAS 39423-51-3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>610 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>220 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
- Causes skin burns.

**Serious eye damage/eye irritation**
- Causes serious eye damage.

**Respiratory or skin sensitisation**

<table>
<thead>
<tr>
<th>Sensitisation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitisation</td>
<td>Due to partial or complete lack of data the classification is not possible.</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Possible reproductive hazard. Possible risk of harm to the unborn child. Possible risk of impaired fertility.</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity**

<table>
<thead>
<tr>
<th>Single Exposure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Repeated Exposure</td>
<td></td>
</tr>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine (CAS 2855-13-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Scenedesmus subspicatus</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Leuciscus idus</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Scenedesmus subspicatus</td>
</tr>
<tr>
<td>Crustacea</td>
<td>NOEC</td>
<td>Daphnia magna</td>
</tr>
</tbody>
</table>

**Nonyl phenol (CAS 84852-15-3)**

<p>| Aquatic                                                                   |                                  |                               |
| <strong>Acute</strong>                                                                 |                                  |                               |
| Algae                                                                      | EC50                             | Scenedesmus subspicatus       | 1.3 mg/l, 72 Hours            |</p>
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Pimephales promelas</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>NOEC</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>NOEC</td>
<td>Pimephales promelas</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

Partition coefficient n-octanol / water (log Kow)

Nonyl phenol (CAS 84852-15-3) 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 of in accordance with applicable federal, state, and local regulations.

14. Transport information

**TDG**

UN number | UN1760
---|---
UN proper shipping name | Corrosive liquids, n.o.s. (Nonyl Phenol Mixture)
Transport hazard class(es) | Class 8
Subsidiary risk | -
Packing group | III
Environmental hazards | Yes
Special precautions for user | Read safety instructions, SDS and emergency procedures before handling.

**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 | Yes
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

General information

IMDG Regulated Marine Pollutant.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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

Issue date: 08-August-2017
Revision date: 21-July-2019
Version No.: 02
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

Disclaimer

Environmental Technology, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.