



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Trade Name HARDENER BH/GL
MSDS Number 140
CAS Number --0
Supplier TRANS TECH AMERICA, INC.
475 N. GARY AVENUE
CAROL STREAM, IL 60188 USA

Telephone Numbers - 24 Hour Emergency Assistance
Emergency (352)323-3500

Telephone Numbers - General Assistance
Information (630)752-4000

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration	Exposure Limits / Health Hazards
Aminoethylaminopropyl-Trimethoxysilan	1760-24-3	60 - 70 %	OSHA PELs: N/A ACGIH TLV: 200 ppm
SOLVENT NAPHTHA 100	64742-95-6	30 - 40 %	OSHA PEL: 100ppm ACGIH TLV: 125ppm

3 HAZARDS IDENTIFICATION

Emergency Overview

NI

Potential Health Effects, Skin

Prolonged skin contact may lead to extraction of natural oils, with resultant dry skin, cracking, irritation and dermatitis.

Potential Health Effects, Eye

Eye contact causes irritation, redness, tearing, blurred vision. Vapors may cause severe eye irritation, redness, tearing and blurred vision. Vapors and the liquid itself will irritate the eyes.

Potential Health Effects, Inhalation

Excessive vapor concentration in air, especially in confined spaces, may cause asphyxiation. Excessive inhalation of vapors can cause nasal, throat and respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Potential Health Effects, Ingestion

Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Signs & Symptoms of Short-Term (Acute) Exposure

Dizzy feeling, irritation of mucous membranes.

Effects of Long-Term (Chronic) Exposure

Health studies have shown that many solvents pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids and vapors should be minimized. Repeated or prolonged inhalation of vapor may cause liver and kidney damage. Repeated inhalation of vapor in high concentration can change the blood picture. Prolonged or continuous inhalation of vapors may result in delayed lung damage.

4 FIRST AID MEASURES

Skin

Wash affected skin areas with soap and water. See a physician if irritation persists. DO NOT use solvents or thinners.

Eye

Remove contact lenses, keep eyelids open. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Call a physician.

Inhalation

Remove to fresh air and keep warm. Irregular breathing/no breathing: artificial respiration. Consult a physician.

Ingestion

Do not induce vomiting. Call for medical assistance. Keep at rest.

Medical Conditions Aggravated by Exposure

In all cases of doubt or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Unconsciousness: lateral position - call a physician.

5 FIRE FIGHTING MEASURES

Extinguishing Media

Alcohol resistant foam, co2, powders, water spray.

Not suitable: water jet

Basic Fire Fighting Procedures

Water spray may be ineffective. For extinguishing larger fires or inside buildings, a self-contained breathing apparatus is recommended to protect firefighters from any hazardous combustion products.

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Unusual Fire & Explosion Hazards

Keep containers tightly closed. Cool endangered containers with water in case of fire. Do not allow the quenching water into the sewage system.

Flash Point 45 C°

Flammability Limits in Air, Lower, % by Volume 0.6

Flammability Limits in Air, Upper, % by Volume 10

6 ACCIDENTAL RELEASE MEASURES

Emergency Action

Remove sources of ignition. Provide for sufficient ventilation.

Spill or Leak Procedure

Remove sources of ignition. Ventilate area. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. Clean preferably with a detergent. Avoid use of solvents.

7 HANDLING & STORAGE

Handling

Avoid prolonged skin contact. Prevent the creation of flammable or explosive concentrations of vapor in air. Avoid vapor concentration higher than the occupational exposure limit. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Comply with the health and safety at work laws.

Storage

Store containers away from heat in a cool ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access.

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. Always keep in containers of same material as the original one. Avoid heating and direct sunlight.

See also instructions on the label.

Ventilation

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particles and solvent vapor below the OEL, suitable respiratory protection must be worn.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Personal Protection Equipments (PPE)

Safety glasses or goggles.

Skin Protection: Personal Protection Equipments (PPE)

Use protective gloves. After washing hands, replace lost skin fat by fat containing skin creams.

Respiratory Protection: Personal Protection Equipments (PPE)

If workplace limits are exceeded, a gas mask approved for this particular job must be worn.

General

Personal should wear antistatic clothings made of natural fiber or of high temperature resistant synthetics fiber. All parts of the body should be washed after contact.

This product is unlikely to harm health, given normal and proper handling and hygienic precautions. Prolonged inhalation of vapors in high concentrations may lead to headache, giddiness and nausea. In case of contact with the product: danger of resorption through the skin, irritation of skin/mucous membranes.

Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

9 PHYSICAL & CHEMICAL PROPERTIES

Odor and Appearance

Clear liquid with odor of organic solvents

Boiling Point	160 C°
Specific Gravity	1
Melting Point	NI
Percent Volatile	35 %
Vapor Pressure	5
Evaporation Rate	N.A.
Vapor Density	> 1
Solubility In Water	Not soluble

10 STABILITY & REACTIVITY

Stability/Incompatibility

Stable under recommended storage and handling conditions. (see section 7)

Materials to Avoid: Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous Reactions/Decomposition Products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

11 TOXICOLOGICAL INFORMATION

Routes of Exposure

Inhalation, eyes, skin, ingestion.

12 ECOLOGICAL INFORMATION

EcoToxicological Information

Do not empty into drains. If the product contaminates lakes, rivers or sewer systems, inform appropriate authorities in accordance with local regulations.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Disposal according to federal, state and local regulations.

14 TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements:

General Transportation Information for Bulk Shipments

Proper Shipping Name	Paint Related	UN/NA Code	1263
Hazard Class	3		
Packaging Group	Class III		
Labels Required	Flammable Liquid		

15 REGULATORY INFORMATION

NFPA Ratings

Health	Flammability	Reactivity	Special Hazards
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HMIS Ratings

Health 3	Flammability 2	Reactivity 1	Personal Prot. Equip. C
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16 OTHER INFORMATION

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