

**Section 1 Product and Company Identification**

**Product Name:** Thermo-Fill HT Part B  
**Supplier:** NRI 3875 Fiscal Court, Ste #100 Riviera Beach, FL 33404. 561-683-6992  
**Contact information for Canada:** Aluma Systems - Industrial Services 240 Tecumseh Street Sarnia, ON N7T 2K9  
**Emergency Phone Number:** 800-535-5053 (US and Canada)  
**Product Description:** Hardener solution  
**Product Use:** Intended to repair pipes.  
**Chemical Name or Synonym:** N/A

**Section 2 Hazards Identification**

**2.1 Classification of the substance or mixture:**

Skin corrosion/irritation – Category 2  
Serious eye damage/eye irritation – Category 1  
Skin sensitization - Category 1  
Chronic Aquatic Toxicity – Category 2

**2.2 Label Elements:**



**Signal Word: Danger**

**Hazard Statements:**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction  
H318 Causes serious eye damage  
H411 Toxic to aquatic life with long lasting effects

**Precautionary Statement:**

P362 - Take off contaminated clothing and wash before reuse  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/ physician  
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P273 - Avoid release to the environment  
P391 - Collect spillage

**Section 3 Composition/ Information on Ingredients**

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**3.2 Mixtures**

Chemical Name	CAS-No	Weight %
Amine terminated polymer of diaminocyclohexane (694-83-7) and phenol formaldehyde glycidyl ether polymer (28064-14-4)	N/A	40 - 70
1,2-diaminocyclohexane	694-83-7	20 – 50
3-(Triethoxysilyl) propylamine	919-30-2	0 - 3
1,5-Pentanediamine, 2-methyl	15520-10-2	0 - 1
Hexamethylenediamine	124-09-4	< 0.5
Cyclopentanemethanamine, 2-amino	21544-02-5	0-0.5

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

**Section 4 First Aid Measures**

**4.1 Description of first aid measures**

**General Advice:** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact:** Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

**Skin Contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Remove material from skin immediately In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**Inhalation** Move to fresh air. If symptoms persist, call a physician.

**Protection of First-aiders:** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**4.2 Most important symptoms/effects, acute and delayed:** Hives. Itching. Rashes. Serious eye irritation or damage.

**4.3 Indication of any Immediate Medical Attention and Special Treatment Needed**

**Notes to Physician:** May cause sensitization of susceptible persons. Treat symptomatically.

**Section 5 Fire Fighting Measures**

**5.1 Extinguishing Media**

**Suitable Extinguishing Media:** Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media:** No information available.

**5.2 Special Hazard Arising from the Substance or Mixture:**

May cause sensitization by skin contact. Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides and nitrogen oxides.

**5.3 Advice for Fire-fighters:** As in any fire, wear self-contained breathing apparatus and full protective gear.

**Section 6 Accidental Release Measures**

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures:** Avoid contact with skin, eyes and clothing. Use personal protective equipment. Evacuate personnel to safe areas.

**6.2 Environmental precautions:** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

**6.3 Methods and materials for containment and cleaning up:** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**6.4 Reference to other sections:** See Section 12 for additional information.

**Section 7 Handling and Storage**

**7.1 Precautions for safe handling:**

**Protective measures:** Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not take internally.

**Hygiene Measures:** When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. Wash thoroughly after handling.

**7.2 Conditions for safe storage including any incompatibilities:** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

**Section 8 Exposure Controls / Personal Protection**

**8.1 Control Parameters**

**Exposure Limits:**

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
3-(Triethoxysilyl) propylamine 919-30-2	-	-	-	TWA: 3 ppm TWA: 28 mg/m <sup>3</sup> STEL: 6 ppm STEL: 55mg/m <sup>3</sup>	-

**8.2 Exposure Controls**

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas.

**8.2.2 Personal protective equipment:**

**Eye Protection:** Tightly fitting safety goggles.

**Skin and Body Protection:** Impervious clothing.

**Hand Protection:** Impervious gloves.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**Environmental Exposure Controls:** Do not allow material to contaminate ground water system.

**Section 9 Physical and Chemical Properties**

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a) Physical Appearance:	Orange Paste	
b) Odor:	No information available	
c) Odor Threshold:	No data available	
d) pH:	No data available	
e) Melting Point/freezing point:	No data available	
f) Initial Boiling point and boiling range:	No data available	
g) Flash Point:	No data available	
h) Evaporation rate (ether=1):	No data available	
i) Flammability (solid, gas):	No data available	
j) Upper/lower flammability or explosive Limits:	Lower: N/A	Upper: N/A
k) Vapor Pressure:	No data available	
l) Vapor density (Air=1)	No data available	
m) Relative Density:	No data available	
n) Solubility:	Insoluble in water	
o) Partition coefficient (n-octanol/water):	No data available	
p) Auto-ignition Temperature:	No data available	
q) Decomposition Temperature:	No data available	
r) Viscosity:	4.2 – 5.2 million cP	
s) Explosive Properties:	No information available	
t) Oxidizing Properties:	No information available	

**Section 10 Stability and Reactivity**

- 10.1 Reactivity:** Not data available  
**10.2 Chemical Stability:** Stable under standard normal conditions.  
**10.3 Possibility of Hazardous reactions:** None under normal processing.  
**10.4 Conditions to Avoid:** Thermal decomposition, do not overheat. Incompatible products.  
**10.5 Incompatible Materials / Chemicals:** Acids. Bases. Amines. Strong oxidizing agents.  
**10.6 Hazardous Decomposition Products:** Phenols. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>)

**Section 11 Toxicological Information**

**11.1 Information on Toxicological Effects**

**Acute Toxicity**

**Product Information**

**Inhalation:** No known effect.

**Eye Contact:** Causes serious eye damage.

**Skin Contact:** Causes skin irritation. May cause allergic skin reaction

**Ingestion:** May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol formaldehyde glycidyl ether polymer	11,400 mg/kg (rat)	-	-
1,2-diaminocyclohexane	4,556 mg/kg (rat)	-	-
3-(Triethoxysilyl) propylamine	1,780 mg/kg (rat)	4mL/kg (rabbit)	-

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**Sensitization:** May cause sensitization of susceptible persons. May cause sensitization by skin contact.

**Mutagenic Effects:** No information available.

**Carcinogenic Effects:** No information available.

**Reproductive Toxicity:** No information available.

**Developmental Toxicity:** No information available.

**STOT - single exposure:** No information available.

**STOT - repeated exposure:** No information available.

**Aspiration Hazard:** No information available.

**Section 12 Ecological Information**

**12.1 Toxicity**

**Ecotoxicity Effects:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Daphnia (Water Flea)	Magna
Hexamethylene-diamine	EC50 72 h: 15 mg/L (Scenedesmus capricornutum - fresh water algae)	LC50 96-h: >56 mg/L (Lepomis macrochirus)	EC50 48-h: 23.4mg/L	

**12.2 Persistence and degradability:** No information available

**12.3 Bioaccumulative potential:**

Chemical Name	Log Pow
Hexamethylene-diamine	3.242

**12.4 Mobility in soil:** Absorbs on soil

**12.5 Results of PBT and vPvB assessment:** No information available

**Section 13 Disposal Considerations**

**13.1 Waste treatment methods:** Dispose of in accordance with local regulations

**Uncleaned packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other Information** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

**Section 14 Transport Information**

**DOT**

**UN-Number:** UN2735

**Proper Shipping Name:** Amines, liquid, corrosive, n.o.s. (1,2 diaminocyclohexane)

**Hazard Class:** 8

**Packing Group:** II

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**IMDG/IMO**

**UN-Number:** UN2735

**Proper Shipping Name:** Amines, liquid, corrosive, n.o.s. (1,2 diaminocyclohexane)

**Hazard Class:** 8

**Packing Group:** II

**EmS No.:** F-A, S-B

**IATA**

**UN-Number:** UN3082

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s.

**Hazard Class:** 9

**Packing Group:** III

**ERG Code:** 9L

**Section 15 Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**  
**International Inventories:**

TSCA	EINECS/ELI NCS	DSL/NDSL	PICCS	ENCS	IECSC	AICS	KECL
-	-	-	-	-	-	-	-

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**Chemical Safety Assessment:** No information available

**Section 16 Other Information**

**Full text of R-phrases referred to under Sections 2 and 3:**

R43 - May cause sensitization by skin contact

R34 - Causes burns

R22 - Harmful if swallowed

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R20/22 - Harmful by inhalation and if swallowed

R36/38 - Irritating to eyes and skin

**Full text of H-Statements referred to under sections 2 and 3:**

H315 - Causes skin irritation

H319 - Causes serious eye irritation



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H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H411 - Toxic to aquatic life with long lasting effects  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage

**Key literature references and sources for data:** [www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Key Legend Information:**

N/A – Not Applicable

ND – Not Determined

OSHA – Occupational Safety and Health Administration

NIOSH – National Institute for Occupational Safety and Health

**The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. NRI makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. NRI assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material.**

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