

**Safety Data Sheet**  
**GT Hardener- Amine Base - Part B**

**Section 1. Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

**Product name:** GT Hardener-Amine Base – Part B

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Recommended use:** Intended to repair and protect pipes

**Uses advised against:** No information available

**1.3. Details of the supplier of the safety data sheet**

**Supplier:** NRI  
3875 Fiscal Court Suite #100  
Riviera Beach, FL 33404. USA.  
1- 561 - 683 - 6992

**E-mail address:** No information available.

**1.4. Emergency telephone number**

**Emergency telephone number:** 1 800-535-5053

**Section 2. Hazards identification**

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

**2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)**

Acute oral toxicity – Category 4  
Acute dermal toxicity – Category 4  
Acute Inhalation Toxicity – Category 4  
Eye irritation – Category 1  
Skin corrosion/irritation – Category 1A  
Specific target organ toxicity, single exposure – Category 3

**Physical hazards:** None

**2.2 Label elements**

**Hazard pictograms:**



**Signal word:** Danger

**Hazard statements:**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled  
H318 Causes serious eye damage.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation

**Precautionary statement:**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / eye protection / face protection.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P405 Store locked up.  
P501 Dispose of contents/container through a waste management company authorized by the local government.

**2.3. Other information:** N/A

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**Section 3. Composition/ Information on Ingredients**

3.1. Substances: Not Applicable

3.2. Mixtures

Component	EC No	CAS #	Weight %	EU-GHS Substance Classification	REACH Number
2-Methyl-1,5-pentamethylenediamine	-	15520-10-2	15 – 65	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1A (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H332) STOT SE 3 (H335)	Not data available
1,2 diaminocyclohexane	-	694-83-7	7 – 15	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1A (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H332) STOT SE 3 (H335)	Not data available
Propylidynetrimethanol, propoxylated, reaction products with ammonia	-	39423-51-3	10 – 35	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Eye Dam. 1 (H318)	Not data available

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

**First aid measures for accidental**

**General advice:** If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

**Inhalation:** Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact:** Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact:** Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Ingestion:** Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Never give anything by mouth

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to an unconscious person.

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

**4.2 Most important symptoms/effects, acute and delayed:** Corrosive effects. The product causes burns of eyes, skin and mucous membranes. Permanent eye damage including blindness could result.

**4.3 Indication of immediate medical attention and special treatment needed:** Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours. If evacuation of stomach contents is necessary, use method least likely to cause aspiration. This material, if aspirated into the lungs, may cause chemical pneumonitis.

### Section 5. Fire Fighting Measures

#### 5.1 Extinguishing media

**Suitable extinguishing media:** Carbon dioxide, foam, dry chemical, water spray, alcohol resistant foam.

**Unsuitable extinguishing media:** No data available.

#### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** Fire may produce irritating, corrosive and or toxic gases. Decomposition of this product may emit oxides of nitrogen and carbon monoxide.

**5.3 Advice for firefighters:** Wear complete fire fighting gear and self-contained breathing apparatus to protect against potential harmful and/or irritating fumes. Use water to keep fire exposed containers cool. Do not use a solid water stream as it may scatter and spread fire. Containers exposed to excessive heat may rupture; use water spray to keep fire-exposed containers cool.

### Section 6. Accidental Release Measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

##### 6.1.1 For non-emergency personnel

**Protective equipment:** Use personal protective equipment (See Section) to prevent any contamination of skin, eyes and personal clothing.

**Emergency procedures:** Remove ignition sources. Provide sufficient ventilation, control dust. Evacuate personnel to safe areas.

**6.1.2 For emergency responders:** Use appropriate personal protective clothing. Use gloves and safety glasses.

**6.2 Environmental precautions:** Prevent from entering into drains, ditches, waterways by using sand, earth or appropriate barriers. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Avoid release to the environment.

#### 6.3. Methods and materials for containment and cleaning up

**6.3.1 For containment:** Cover drains. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3.2 For cleaning up:** Stop leak without additional risk. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

**6.3.3 Other Information:** Clear spills immediately.

**6.4 Reference to other sections:** See Section 12 for additional information. Dispose of in accordance with applicable local and federal environmental control regulations.

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### Section 7. Handling and Storage

#### 7.1 Precautions for safe handling

**Handling:** 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:** Store in a cool, dry place with adequate ventilation. Keep in original containers. Store in tightly closed containers to prevent moisture absorption and loss of volatiles. Store away from heat and open flame.

#### 7.3 Specific end use(s)

**Exposure scenario:** No information available.

**Other guidelines:** No information available

### Section 8. Exposure Controls / Personal Protection

#### 8.1 Control parameters

**Exposure limits:** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Derived no effect level:** No information available.

**Predicted No Effect Concentration (PNEC):** No information available.

#### 8.2 Exposure controls

**8.2.1 Appropriate engineering controls:** Ensure adequate ventilation, especially in confined areas.

##### 8.2.2 Personal protective equipment

**8.2.2.1 Eye and face protection:** Safety glasses with side-shields. Risk of contact: Tightly fitting safety goggles.

**8.2.2.2 Skin protection:** Wear impervious clothing as necessary to protect against product contact. Refer to CFR1910.132 and CFR1910.136 for OSHA approved standards on protective clothing and footwear. Wear chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**8.2.2.3 Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**8.3 Environmental exposure controls:** Do not allow material to contaminate ground water system.

### Section 9. Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Clear red
Odour:	Pungent, Amine-like
Odour threshold:	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks-Method</u>
pH:	No data available	None known
Melting point range:	No data available	None known

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<b>Boiling point/boiling range:</b>	No data available	None known
<b>Flash Point:</b>	167 °F (75 °C)	No Data Available
<b>Evaporation rate:</b>	No data available	None known
<b>Flammability (solid, gas):</b>	No data available	None known
<b>Upper/lower flammability or explosive limits:</b>	No data available	None known
<b>Vapour pressure:</b>	No data available	None known
<b>Vapour density:</b>	No data available	None known
<b>Relative density:</b>	0.905 at 75 °F	Density Cup Method
<b>Solubilities:</b>	No data available	None known
<b>Partition coefficient (n-octanol/water):</b>	No data available	None known
<b>Auto-ignition temperature:</b>	No data available	None known
<b>Decomposition temperature:</b>	No data available	None known
<b>Viscosity:</b>	26.3 cPs at 75 °F	Rheometer Method
<b>Explosive properties:</b>	No data available	None known
<b>Oxidizing properties:</b>	No data available	None known

**9.2 Other information**

<b>VOC Content (%):</b>	No data available	None known
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**Section 10. Stability and Reactivity**

**10.1 Reactivity:** Stable

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** None under normal processing. Polymerization will not occur under normal conditions.

**10.4 Conditions to avoid:** Avoid heat, sparks, open flames, ignition sources, air; material is hygroscopic.

**10.5 Incompatible materials:** Strong acids, bases, oxidizing agents.

**10.6 Hazardous decomposition products:** Carbon monoxide, carbon dioxide, nitrogen oxides.

**Section 11. Toxicological Information**

**11.1 Information on toxicological effects:**

**Acute toxicity:**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Methyl-1,5-pentamethylenediamine	1170 mg/kg (rat)	1870 mg/kg (rabbit)	4.9 mg/l/1h (rat)
1,2 diaminocyclohexane	4556 mg/kg (rat)	-	-
Propylidynetrimethanol, propoxylated, reaction products with ammonia	220 mg/kg (rat)	562 mg/kg (rabbit)	-

**Skin corrosion/irritation:** Cause sever skin burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Serious eye damage/irritation:** Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.

**Inhalation:** Inhalation of vapor is irritating to the respiratory system, may cause throat pain and cough.

**Ingestion:** Harmful if swallowed. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

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Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possible the digestive tract.

- Germ cell mutagenicity:** Did not show mutagenic effects in animal experiments.  
**Carcinogenicity:** Not considered to be a carcinogen by OSHA/NTP/IARC/ACGIH.  
**Reproductive toxicity:** Classification criteria are not met based on available data.  
**STOT- single exposure:** Respiratory tract irritation  
**STOT- repeated exposure:** Classification criteria are not met based on available data.  
**Aspiration hazard:** No information available.

**Symptoms related to the physical, chemical and toxicological characteristics:**

- Acute toxicity:** Harmful by inhalation, in contact with skin and if swallowed. Causes severe burns.  
**Skin Corrosion/irritation:** Exposure quickly causes a strong corrosive action upon all body tissue. Extremely corrosive and destructive to tissue.  
**Serious Eye Damage / Eye Irritation:** Corrosive to the eyes and may cause severe damage including blindness.  
**Respiratory Sensitization:** No classification due to the lack of data  
**Skin Sensitization:** May cause sensitization by skin contact.

**Delayed and immediate effects and also chronic effects from short and long term exposure:**

- Short term exposure: No specific data.  
 Long term exposure: No specific data

**Section 12. Ecological Information**

**12.1 Toxicity:**

Chemical Name	Aquatic Invertebrates	Toxicity to Fish	Bacteria
2-Methyl-1,5-pentamethylenediamine	EC50 (Daphnia, 48h): 19.8 mg/L	LC50: 1825 mg/L	EC50 (Algae, 72h): > 100 mh/L
Propylidynetrimethanol, propoxylated	-	LC50> 100 mg/L	-
1,2 diaminocyclohexane	-	LC50 (Golden orfe)(48-hr): 200 mg/l	-

- 12.2 Persistence and degradability:** Readily biodegradable  
**12.3 Bioaccumulative potential:** Significant environmental persistence and bioaccumulation would be expected.  
**12.4 Mobility in soil:** None known.  
**12.5 Results of PBT and vPvB Assessment:** No information available.  
**12.6 Other adverse effects:** Harmful to aquatic life.  
**12.7 Additional information:** No information available.

**Section 13. Disposal Considerations**

**13.1 Waste treatment methods:**

- 13.1.1 Product / Packaging disposal:** Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**Waste codes / waste designation according to LoW:** 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.

**13.1.2 Waste treatment-relevant information:** Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**13.1.3 Sewage disposal-relevant information:** This product should not be allowed to enter drains, water courses or the soil.

**13.1.4 Other disposal recommendations:** Dispose of waste and residues in accordance with local authority requirements.

**Section 14. Transport Information**

**DOT**

**UN-Number:** UN2735

**Proper Shipping Name:** Amine, liquid, corrosive, n.o.s

**Hazard Class:** 8

**Packing Group:** II

**IMDG**

**U.N. number:** UN 2735.

**Proper Shipping Name:** Amine, liquid, corrosive, n.o.s.

**Transport Hazard class:** 8.

**Packing group:** II

**IATA**

**UN-Number:** UN2735

**Proper Shipping Name:** Amine, liquid, corrosive, n.o.s

**Hazard Class:** 8

**Packing Group:** II

**ERG Code:** 8L

**Section 15. Regulatory Information**

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

**US Federal Regulations:** All components are on the US EPA TSCA Inventory List or are not required to be listed on the inventory.

**SARA Title III Section 311/312 (40CFR370):** No reportable components

**SARA Title III Section 302):** No reportable components

**TSCA Inventory Status:** Reported/included

**Canadian DSL Status:** Reported/included

**Chemicals Known to the State of California to Cause Cancer or Reproductive Toxicity:** None known to be in the product at levels requiring a warning.

**Section 16. Other Information**

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



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H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin.  
H332 - Harmful if inhaled  
H318 - Causes serious eye damage.  
H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation

**Key Legend Information:**

N/A – Not Applicable  
ND – Not Determined  
OSHA – Occupational Safety and Health Administration

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.

Rev03\_05-15-2017