SAFETY DATA SHEET

1. Product Identification

Product name	T-88 Adhesive Hardener Part B
SDS Number	1100B00
Product type	Polyamide Resin Mixture
Recommended use of the chemical and restrictions on use	Directed at, but not limited to, the adhesive of similar and dissimilar substrates.
Restrictions	None known
Manufacturer/Supplier information	
Company name	SYSTEM THREE RESINS, INC.
Address	3500 W. Valley Hwy North Suite 105 Auburn, WA 98001-2436 United States
Telephone	1-253-333-8118
Website	www.systemthree.com
Email	support-08@systemthree.com
Emergency Contact	CHEMTREC (U.S. and CANADA) 1-800-424-9300 CHEMTREC (Outside the U.S.) 1-703-527-0585

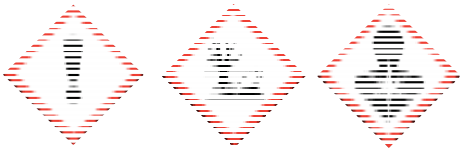
2. Hazard(s) Identification

Classification of substance or mixture/Signal word

WARNING.

ACUTE TOXICITY, ORAL Category 4
SKIN CORROSION/IRRITATION Category 2
SKIN SENSITIZATION Category 1
SERIOUS EYE DAMAGE/EYE IRRITATION Category 2
ACUTE TOXICITY, INHALATION Category 4
SENSITIZATION, RESPIRATORY Category 1
SPECIFIC ORGAN TOXICITY, SINGLE EXPOSURE (Respiratory tract irritation) Category 1
ACUTE AQUATIC TOXICITY Category 1
CHRONIC AQUATIC TOXICITY Category 4

GHS Label Elements
Hazard Pictograms



Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements

Prevention

P261 Avoid breathing fumes/vapors.
P264 Wash hands and exposed skin thoroughly after handling.
P271 Use only outdoors or in a well ventilated area.

P272 Contaminated work clothes should not be allowed out of the workplace.
P280 Wear eye protection/face protection. Wear protective gloves.

Response

P301 + P312 IF SWALLOWED: DO NOT induce vomiting
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim 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.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified (HNOC)

None known.

3. Composition/Information On Ingredients

Chemical Name	CAS Number	Content (%)
Polyamide Polymer	Proprietary	60-70
Nonyl Phenol	84852-15-3	30-40
Triethylenetetramine	112-24-3	1-5

4. First-Aid Measures

Skin contact

Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.

Eye contact

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 15 minutes. Get medical attention immediately. Suitable emergency eye wash facility should be available in work area.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

5. Fire-Fighting Measures

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.
Alcohol-resistant foam
Carbon dioxide (CO_2)

	Dry chemical, dry sand, limestone powder, water fog
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst. See also “Products of Combustion” in this section and Section 10.
Products of Combustion	May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from firefighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Ammonia gas may be liberated at high temperatures. In the case of incomplete combustion, an increased formation of oxides of nitrogen (NOx) is to be expected. Burning produces noxious and toxic fumes.
Special protective equipment and precautions for fire-fighters	Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.
Fire-fighting equipment/instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Specific methods	Water spray may be used to cool fire-exposed containers
General fire hazards	None known.

6. Accidental Release Measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.
Protective equipment	Proper PPE includes: disposable gloves, eye protection and skin protection.
Emergency procedures	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".
Methods and materials for containment/cleanup	Stop spill at source. Move containers from spill area. Absorb with an inert absorbent material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Wash the spill area clean with water and detergent, observing environmental requirements.
Environmental precautions	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).

7. Handling And Storage

Precautions for safe handling	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty

	containers retain product residue and can be hazardous. Do not reuse container.
Precautions/Recommendations for safe/proper storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Chemical incompatibilities	None known.

8. Exposure Controls/Personal Protection

Permissible exposure limit (OSHA)	No information on product itself
Occupational exposure limits	No information on product itself.
Engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Individual protection measures/Personal protective equipment	
Eye/face protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: chemical splash goggles.
Hand protection	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.
Skin protection	Wear clean, body-covering clothing to prevent contact with product.
Respiratory protection	Use a properly fitted, NIOSH-approved respirator for organic vapors.
General hygiene during/after use	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

9. Physical And Chemical Properties

Chemical family	Polyamide
Appearance	Amber-colored liquid
Physical State	Liquid
Odor	Mild ammonia odor
Odor threshold	Not determined

Density (Specific gravity)	0.72 g/cm^3
Viscosity	30-40,000 cps
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	Not applicable
Flash point	Not available
Evaporation rate (Ether =1)	Slower than ether
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	
Upper flammability limit (by volume)	Not available
Lower flammability limit (by volume)	Not available
Material VOC	None
Vapor density (AIR =1)	Heavier than air
Relative density	Not determined
Solubility	Negligible, in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Stability And Reactivity

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Epoxy resins and epoxy resin hardeners react with each other producing heat. They should not be mixed with each other under uncontrolled conditions or in a large mass as the ensuing exothermic reaction may produce heat, smoke and hazardous decomposition products.
Incompatible materials	Organic and mineral acids. Reactive metals (e.g. sodium, calcium, zinc, etc). Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Materials reactive with hydroxyl compounds. Oxidizing agents, amines, bases and reducing agents. Nitrous acid and other nitrosating agents. CAUTION! N-nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
Hazardous decomposition products	Organic acid vapors, nitric acid, ammonia, nitrogen and carbon oxides, nitrosamine and aldehydes. Nitrogen oxide can react with water vapors to form corrosive nitric acid.

11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity

Component	CAS No	Test	Species	LD50
Triethylenetetramine	112-24-3	Oral	Rat	300 – 2,000 mg/kg
		Dermal	Rabbit	1,000 – 2,000 mg/kg

Sensitization

Component	CAS No	Test	Species	Result
Triethylenetetramine	112-24-3	Skin	Guinea Pig	Causes burns May cause sensitization by skin contact.

Carcinogenicity	No information on the product itself.
Reproductive Toxicity	No information on the product itself.
Teratogenicity	No information on the product itself.
Specific Target Organ Toxicity (single exposure)	No information on the product itself.
Specific Target Organ Toxicity (repeated exposure)	No information on the product itself.
Aspiration Hazard	Material is an aspiration hazard
Information on the likely routes of exposure	(See Section 4)

12.Ecological Information

Ecotoxicity

Component	CAS No	Test	Species	Dose	Exposure
Triethylenetetramine	112-24-3	LC50	Fathead minnow	>100 mg/l	96 h

Persistence and degradability Not available

Bioaccumluative Potential

Mobility in Soil

Soil/water Partition Coefficient (K_{OC}) Not available

Other Adverse Effects No known significant effects of critical hazards.

13. Disposal Considerations

Waste from residues/ unused product	Product should not be allowed to enter drains, water courses or the soil; dispose of this material and its containers in a safe way. Contact supplier if guidance is required.
Contaminated Packaging	Dispose of container and unused contents in accordance with federal, state, and local requirements.

14.Transport Information

DOT

Not regulated

IATA

Not regulated

IMDG	Not regulated
Special Precautions for User	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory Information

U.S. Federal Regulations	**United States – TSCA 8(b) –** All components are listed or exempted.
DSL Status	All components of this product are on the Canadian DSL list.
SARA 311/312 Hazards	Acute health hazard.
California Prop. 65	None.

This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

16. Other Information, Including Date Of Preparation Or Last Revision

HMIS Rating		**WHMIS Rating: D2B**
Health	**2**	
Flammability	**1**	
Physical Hazards	**0**	
Date of printing		10/23/15
Date of issue/Date of revision		10/23/15
Date of previous issue		None
Prepared By:		J. Bartlett
Abbreviations and Acronyms		ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstracts Service (division of the American Chemical Society) DOT: US Department of Transportation GHS: Globally Harmonized System of Classification and Labeling of Chemicals HMIS: Hazardous Materials Identification System IARC: International Agency For Research on Cancer IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) IMDG: International Maritime Code for Dangerous Goods NFPA: National Fire Protection Association NIOSH: National Institute of Occupational Safety and Health NTP: National Toxicology Program OSHA: Occupational Safety and Health Administration SARA: Superfund Amendments and Reauthorization Act VOC: Volatile Organic Compound

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