Safety Data Sheet

1. Product and Company Identification

Product Name: **NUPLABOND® A**
Product Part #: PN 0202015
Material Uses: Adhesive, sealing, and coating compound
(M)SDS#: 213B-20151104
Validation Date: Nov-04-2015
Supplier/Manufacturer: Specialty Polymers & Services, Inc. (SP&S, Inc.)
28064 Avenue Stanford, Suite F Valencia, CA 91355
Non-emergency phone number: (661) 294-1790 (7AM – 5PM PST)
E-mail: msds@spolymers.com

In case of emergency: Chemtrec (800) 424-9300 or (703) 527-3887

2. Hazards Identification

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Acute Toxicity(dermal):	Category 4, H312	Aquatic Toxicity, Acute:	Category 1, H400
Skin corrosion:	Category 1, H314	Aquatic Toxicity, long term:	Category 1, H410

GHS LABEL ELEMENTS:

HAZARD SYMBOLS:

SIGNAL WORDS: Danger!

HAZARD STATEMENTS:

H312 Harmful in contact with skin
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

PREVENTION:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mists.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves, clothing, and eye/face protection.

RESPONSE:
P301+P330+P331+P312 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call POISON CENTER and/or doctor if you feel unwell.
P303+P361+P634+P353+P352 IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical attention.
P304+P340 IF INHALED: Remove person to fresh air and keep 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.
P308+P313 IF exposed or concerned: Get medical attention.
P391 Collect spillage.

STORAGE: P403+P233 Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL: P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

See toxicological information (section 11)
General Information: Read entire MSDS for a more thorough evaluation of the hazards

3. Composition / Information on Ingredients

Name	CAS Number	%
Triethylenetetramine	112-24-3	1 – 10
Fatty Acids, C18-Unsaturated., Dimers, Polymers With polyethylenepolyamines	103758-99-2	70 – 90

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. First Aid Measures

Eye Contact:	Check for and remove any contact lenses. Immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.
Skin Contact:	In case of contact, wash affected areas with plenty of water, and soap, if available, for several minutes. Remove and clean contaminated clothing and shoes before re-use. Get medical attention if irritation occurs.
Inhalation:	Move exposed person to fresh air. If not breathing, give artificial respiration or oxygen. If breathing is difficult, transport to medical care and, if available, give supplemental oxygen. Loosen tight clothing such as a collar, tie, belt, or waistband. Get immediate medical attention.
Ingestion:	Wash out mouth with water. If swallowed dilute by giving two (2) glasses water to drink. Do not induce vomiting until direct to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Note to physician:	No specific treatment. Treat symptomatically. Call poison control center if large quantities were ingested

5. Fire-Fighting Measures

Flash point:	>180°C (>356°F) closed cup
Hazardous Thermal Decomposition Products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, halogenated compounds, metal oxides and other oxides.
Extinguishing Media:	Carbon dioxide, foam, dry chemical, water spray as suitable for the surrounding fire.
Special Exposure Hazards:	Promptly isolate the scene by removing all persons from the vicinity of the fire. No actions shall be taken involving any personal risk or without suitable training.
Special Protective equipment for fire-fighters:	No Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions:	No actions shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering area. Do not touch or walk through spilled material. Avoid breathing vapor or mist and provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental Precautions:	Avoid dispersal of spilled material and runoff that leads to contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution.
Methods of Clean Up:	Stop leak if without risk. Move containers from spill area. Approach spill from up wind if possible. Prevent spill from entering sewers, rivers and other water courses, basements, or confined areas. Wash into effluent treatment plant or proceed as follows. 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. Dispose of only using a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact

information.

7. Handling and Storage

Handling: Wear appropriate personal protective equipment (see Section 8) when handling. Eating, drinking, and smoking should be prohibited in areas where chemical are handled, stored, or processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should be employed in processes where this material is used. Keep in the original container or a suitable alternate made from a compatible material. Keep all containers tightly closed when not in use. Empty containers retain product residue and should be disposed of properly. Do not reuse empty containers for other purposes or to hold other materials.

Storage: Store in accordance with local regulations. Store in original containers, at 40°C or less. Keep away from incompatible materials (see Section 10) and food and drink. Keep all containers tightly closed when not in use and tightly re-seal after use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Recommended Monitoring Procedures: If this product contains ingredients with exposure limits, personal, workplace, atmospheric, or biological monitoring may be required to determine the effectiveness of the ventilation system or other control measures and/or to determine whether it is necessary to use respiratory protective equipment. It will also be necessary to reviewed national guidance documents for determining how to handle and relevant Hazardous Substances

Engineering measures: No special ventilation requirements are necessary for this product. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure below the recommended or statutory limits

Hygiene measures: Wash hands, forearms, and face thoroughly after handling any chemical products, before eating, smoking, and using the lavatory and at the end of the work period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Respiratory: In case of inadequate ventilation wear respiratory protection. 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.

Hands: Chemical Resistant, impervious gloves that comply with an approved safety standard should be worn at all times when handling chemical products if a risk assessment indicates that this is necessary. Consider the parameters specified by the glove manufacture and check gloves during use to ensure they are retaining their protective properties.

Eyes: 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, or dusts. If contact is possible use chemical splash googles unless a higher degree of protection is required.

Skin: Personal Protective equipment for the body should be selected based on the task being performed and the risks involved. Typical protective equipment includes non-absorbent lab coats, disposable protective sleeves, coats, or whole body suits. See a safety specialist to determine the appropriate level of protection for your task.

Environmental Exposure Controls: Emissions from ventilation or work processes should be checked to ensure they comply with the requirements of environmental regulations. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Appearance:	Yellow to amber liquid	Odor	ammoniacal
Boiling Point:	>200°C (392°F)	Freezing Point:	<15°C
Flash Point:	>180°C (>356°F) closed cup	pH:	Not available
Auto-ignition Temperature:	Not available	Flammable Limits:	Not available
Vapor Pressure:	< 1 mm Hg at 20°C (68 °F)	Water Solubility:	Minor
Specific Gravity:	1.00	Vapor Density:	>1 (Air = 1)

Evaporation Rate: <1 (butyl acetate =1) VOC: <1 g/ L (estimated)
Viscosity: ~14,000 cps

10. Stability and Reactivity

Chemical Stability: This product is stable, under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous Polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to Avoid: High temperatures and exposure to strong oxidizing agents, acids, and bases and bulk epoxy resins.
Hazardous Decomposition Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

Acute Toxicity

Product/Ingredient Name	Test	Endpoint	Species	Result
Triethylenetetramine	-	LC0 Inhalation Vapor	Not available	may cause allergic response
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	550 mg/kg
	OECD 420 Acute Oral Toxicity – Fixed Dose	LD50 Oral	Rat	>2500 mg/kg

Irritation / Corrosion

Product/Ingredient Name	Test	Species	Result
Triethylenetetramine	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin – Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes – Mild irritant

Sensitizer

Product/Ingredient Name	Test	Species	Result
104B	OECD 429 Skin Sensitization: local lymph node assay	Skin / Mouse	Sensitizing

Mutagenicity

Product/Ingredient Name	Test	Result
No data available		

Conclusion/ Summary: – the weight of scientific evidence indicates that the components of this product are not genotoxic

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH,NTP or OSHA or :

Reproductive Toxicity

Product/Ingredient Name	Test	Species	Maternal Toxicity	Fertility	Developmental Effects
No data available					

Teratogenicity

Product/Ingredient Name	Test	Species	Results
No data available			

Potential Acute Health Effects

Inhalation: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.
Skin Contact: Severely Irritating to Skin.
Eye Contact: May cause eye burns.

Potential Chronic Health Effects

Product/Ingredient Name	Test	Endpoint	Species	Results
No Data Available				

General: Once sensitized, an allergic reaction may occur when subsequently exposed to very low levels
Target Organs: No known significant effects or critical hazards
Carcinogenicity: No known significant effects or critical hazards
Mutagenicity: No known significant effects or critical hazards
Teratogenicity: No known significant effects or critical hazards

Developmental Effects: No known significant effects or critical hazards
Fertility Effects: No known significant effects or critical hazards

12. Ecological Information

Environmental Effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic Ecotoxicity

Product/Ingredient Name	Test	Endpoint	Exposure	Species	Result
Triethylenetetramine	-	Acute EC50	72 hours Static	Algae	2.1 mg/L
	OECD 202 Daphnia Sp. Acute Immobilization Test	Acute EC50	48 hours Static	Daphnia	12 mg/L
	-	Acute IC50	3 hours Static	Bacteria	680 mg/L
	OECD 203 Fish, Acute toxicity test	Acute LC50	96 hours Static	Fish	570 mg/L

Persistence and Degradability

Product/Ingredient Name	Test	Period	Result
Triethylenetetramine	No data, but expected to readily biodegrade at a slow rate in the environment		

Product/Ingredient Name	Aquatic half-life	Photolysis	Biodegradability
No data available			

Bioaccumulative potential

Product/Ingredient Name	Log P_{ow}	BCF	Potential
No data available			

Other adverse effects: No known significant effects or critical hazards
Other information: BOD5: Not determined COD: Not Determined TOC: Not determined

13. Disposal Consideration

Waste Disposal Method: Disposal of this products, solutions, and by-products should at all times comply with the requirements of environmental and waste disposal legislation and any regional or local authority requirements. Dispose of surplus, non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed on untreated to the sewer system unless this is complaint with all applicable laws and regulations. Incineration by an approved and licensed contractor is the most common disposal method. Packaging materials that and absorbents containing the product can typically be landfilled or incinerated. Contact local authorities to determine the proper means of disposal in your area.

14. Transport Information

DOT (US) Classification: Not regulated for transportation purposes under 49CFR in non-bulk (less than 450L) when transported by motor vehicle, rail car, or aircraft.

TDG (Canadian) Classification: Not regulated for transportation purposes when transported by road or rail.

IATA – small package sizes: container sizes of ≤5 L (for liquids) or ≤5 kg (for solids) in a package with a gross weight of 30kg or less can ship as Limited Quantity using packaging instruction Y964 as long as the shipment is complaint with all applicable operator variations. Environmentally hazardous substances markings and UN boxes are not required when shipping using the Limited Quantity exemption and packaging instruction Y964.

IATA **ID Number:** UN3082 **Label:** Marine Pollutant
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Fatty acid amidoamine resin))
Hazard Class: 9 **Packing Group:** PGIII

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Resource Conservation and Recovery Act (RCRA): This product is considered to be a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 304 - CERCLA: This product does not contain chemicals regulated under Section 304 as extremely hazardous substance(s) for emergency release notification ("CERCLA" List):

SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): Immediate (acute) health hazard

Delayed (chronic) health hazard

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contains) a toxic chemical for routine annual Toxic Chemical Release Reporting under section 313 (40 CFR 372).

TSCA Section 8(b) - Inventory Status: All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA Section 12(b) - Export Notification: This product does not contain chemicals which are subject to Section 12(b) export notification:

State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

International Regulations:

WHMIS: Class D-2B: Material causing other toxic effects

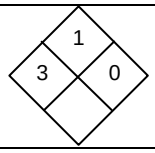
International Lists:

Australia Inventory (AICS):	all components are listed or exempt	Malaysia Inventory (EHS register):	not determined
Canadian Inventory (CEPA-DSL):	all components are listed or exempt	New Zealand Inv. of Chem. (NZIoC):	all components are listed or exempt
China Inventory (IECSC):	all components are listed or exempt	Philippines Inventory (PICCS):	all components are listed or exempt
Japan Inventory:	all components are listed or exempt	Taiwan Inventory (CSNN):	not determined
Korea Inventory:	all components are listed or exempt		

16. OTHER INFORMATION

Hazardous Material Information System (HMIS) - USA	
Health	3
Flammability	1
Physical Hazards	0
Personal Protection	C*

National Fire Protection Association (USA):



*suggested minimum personal protection equipment. End user must determine appropriateness of these suggestions for their applications and usage conditions.

Reason Issued: update
Prepared By: Chris Meyer **Approved By:** Chris Meyer Title: Vice President

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The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

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