



MATERIAL SAFETY DATA SHEET

Section I – IDENTITY INFORMATION

Identity (Tradename): NovaTuff PC-450 Protective Coating Part A and Part B
(formerly AES-450)
Product Type: Epoxy Solution
Date Revised: May 1, 2014
Emergency Number 1-512-617-7333

Section II – HAZARDOUS INGREDIENTS

Hazardous Components	CAS #	OSHA PEL	ACGIH TLV	OSHA STEL	Vapor Pressure mm Hg @ Temp
Part A - Activator					
Bisphenol A Diglycidyl Ether	25068-38-6	NE	NE	NE	N/A
Alkyl Glycidyl Ethers	68609-97-2	NE	NE	NE	N/A
Part B - Base					
Benzyl Alcohol	100-51-6	NE	NE	NE	N/A
Triethylenetetramine	112-24-3	NE	NE	NE	N/A
Trade Secret (Polyamide)		NE	NE	NE	N/A
Pigment (Non-Hazardous)		100 PPM	100 PPM	60 PPM	N/A

Carcinogen Status: IARC: Not Reviewed, NTP: Not Reviewed, OSHA: Not Reviewed

Section III – PHYSICAL DATA

VOC (as applied): 11 g / liter	Part A	Part B
Boiling Point:	Not Determined	>300°F
SP. Gravity (H2O=1):	1.1	1.28
Vapor Density:	Not Determined	Not Determined
Evaporation Rate:	Not Determined	Not Determined
% Volatile:	Not Determined	N/A
Solubility in water:	Nil	Nil
Physical State:	Liquid	Liquid
Appearance and Odor:	Clear Liquid, Aromatic Odor	Liquid, Mild Amine Odor

Section IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup):	Part A >200°F	Part B >200°F
Flammable Limits (LFL/UFL):	Not Established	Not Established
Extinguishing Media:	Carbon Dioxide, Foam, Dry Chemical, Water Spray	
Special Fire Fighting Procedures:	Use self-contained breathing apparatus.	
Unusual Fire and Explosion Hazards:	Decomposition and combustion products may be toxic. Heating forms flammable vapors which may form explosive mixtures with air.	

Section V – REACTIVITY DATA

Stability:	Stable
Incompatibility:	Strong oxidizing agents
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Excessive heat and open flames.
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Aldehydes, and unidentified organic compounds

Section VI – TOXICOLOGICAL INFORMATION

	Part A	Part B
Primary Routes of Exposure:	Dermal, Inhalation	Dermal, Inhalation
Acute Oral Effects (LD50):	Not Determined	Not Determined
Sensitization:	Moderate sensitizer	Potential sensitizer
Acute Dermal Toxicity (LD50):	Not Determined	Not Determined
Skin Irritation:	(Rabbit) Moderate irritant	(Rabbit) Moderate irritant
Eye Irritation:	(Rabbit) Severe irritant	(Rabbit) Severe irritant
Inhalation Toxicity (LC50):	Irritating to mucous membranes and respiratory tract.	

Section VII – FIRST AID MEASURES

Skin: Wipe away excess material with dry towel. Wash affected areas with plenty of water and soap for several minutes. Remove contaminated clothing and shoes. Get medical attention if irritation occurs. Discard or decontaminate clothing before re-use and destroy contaminated shoes.

Eyes: Immediately flush eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention. If physician is not available, flush for an additional 15 minutes.

Ingestion: If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Contains organic solvent. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention immediately!

Inhalation: Remove to fresh air. Get immediate medical attention if respiratory irritation develops or if breathing becomes difficult.

Overexposure Effects: Overexposure to this material can cause skin, eye, and respiratory irritation and allergic skin reaction. Inhalation of vapors from a component in this product cause central nervous system depression, headache, dizziness, loss of balance, coughing, pulmonary edema and liver and kidney damage. Insensitive individuals, cardiac arrhythmia, leading to death, may occur. A component in the product has caused fetal damage following dermal/oral exposure to guinea pigs or rats.

Medical Conditions Aggravated by Exposure: allergy, eczema, or skin conditions.

Section VIII – SPILL OR LEAK PROCEDURES

Accidental Release Procedures: Remove all sources of ignition. Provide explosion proof ventilation. Take up on absorbent material. Shovel with non-sparking tools into closable container for disposal. Wear protective equipment specified below. Thoroughly flush contaminated area with water.

Waste Disposal Methods: Dispose in accordance with federal, state, and local regulations.

Section IX – EXPOSURE CONTROLS/PERSONAL PROTECTION

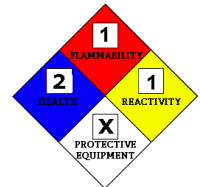
Ventilation:	Explosion proof mechanical ventilation and local exhaust recommended.
Skin Protection:	Wear impervious gloves
Eye Protection:	Wear splash-proof chemical goggles or complete face shield.
Respiratory Protection:	Organic chemical cartridge respirator, if needed.
Other protective Equipment:	Wear appropriate equipment to prevent probability of exposure and personal contact.

Section X – HANDLING AND STORAGE PRECAUTIONS

Warning! May cause severe eye irritation. May cause sensitization. Avoid breathing mist or vapor. Do not take internally. Use with adequate ventilation. Wear chemical splash goggles, impervious gloves, and protective clothing when handling. Wash thoroughly after handling. Keep container closed when not in use. Store in dry area in closed containers. For industrial use only. Flammable solution. Keep away from heat, sparks, and open flame.

Section XI – TRANSPORT INFORMATION

	Part A	Part B
DOT:		
Proper Shipping Name:	Resin Solution	Resin Solution
Hazard Class:	Not Regulated	Not Regulated
ID Number:		
Packing Group:		
ERG Number:		



Section XII – OTHER INFORMATION

OSHA Status: This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

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