MATERIAL SAFETY DATA SHEET

WHMIS HAZARD: **D2A, D2B, E**

SECTION 1 – PRODUCT IDENTIFICATION AND USE

Product Identifier..... **SP-2831 BRUSH GRADE HARDENER**

Product Code..... **850-439**

Product Use ..... Curing agent for SP-2831 Brush Grade Base.

Manufacturer's Name..... **SPECIALTY POLYMER COATINGS, INC.**

Street Address ..... #101 – 20529 – 62nd Avenue City, Province / State: Langley, BC

Postal / Zip Code..... V3A 8R4 Country: CANADA

Supplier's Name..... **SPECIALTY POLYMER COATINGS USA, INC.**

Street Address ..... 22503 FM 521 City, Province / State: Angleton, TX

Postal / Zip Code..... 77515 Country: USA

24 HR. TELEPHONE NUMBER ..... CHEMTREC: 1-800-424-9300

INFORMATION NUMBER..... 1-281-595-3530

SECTION 2 – HAZARDOUS INGREDIENTS

Hazardous Ingredients	**%**	**C.A.S. #**	**Lethal Dose 50% Species & route**	**Lethal Conc. 50% Species & route**	**TLV TWA-ACGIH**
Tris-2,4,6-(Dimethylaminoethyl) Phenol	7-13	90-72-2	1280 mg/kg Rabbit Skin 1200 mg/kg Rat Oral	N/AV	N/AV
Benzene-1,3-Dimethaneamine	10-30	1477-55-0	930 mg/kg Rat Oral 2000 mg/kg Rabbit Dermal	700 ppm/1 Hr/Rat	0.1 mg/M3 Cel
Phenol	3-7	108-95-2	317 mg/kg Rat Oral 630 mg/kg Rabbit Skin	316 mg/M3/Rat	5 ppm Skin 19 mg/M3 Skin
Paratertiarybutylphenol	10-30	98-54-4	3250 mg/kg Rat Oral 2520 mg/kg Rabbit Skin	N/AV	N/AV
Trimethylhexaminethylenediamine	10-30	25620-58-0	910 mg/kg Rat Oral	N/AV	N/AV

CEPA STATUS: All of the ingredients of this product are on the DSL.
TSCA STATUS: All of the ingredients of this product are on the TSCA Inventory.

SECTION 3 – PHYSICAL DATA

Physical State	Liquid.
Odour and Appearance.....	Straw yellow clear.
Odour Threshold (ppm).....	N/AV
Vapour Pressure (mm/Hg)	<20.68 mm/Hg @ 21°C (69.8°F)
Vapour Density (air=1)	N/AV
Evaporation Rate (butyl acetate=1).....	N/AV
Boiling Point	>100°C (>212°F)
Freezing Point	N/AV
pH.....	Alkaline.
Specific Gravity (water=1).....	1.03
Coefficient of water/oil distribution.....	N/AV
Solubility in water (20°C / 68°F)	80%

SECTION 4 – FIRE AND EXPLOSION

Flammability ..... Not flammable as per WHMIS.

Flammability: If Yes, under which conditions? .... N/AP.

Means of extinction..... In case of large fire use: water spray or alcohol foam.
In case of small fire use: Carbon Dioxide, dry chemical, dry sand or limestone.

Special Procedures ..... Wear NIOSH approved Self-Contained Breathing Apparatus with independent air supply. Wear complete body protective butyl rubber clothing. Sudden reaction and fire may result if product is mixed with an oxidizing agent. Personnel in vicinity and downwind should be evacuated. Retain expended liquids from fire fighting for later disposal.

Flash Point and Method .... >93.3°C (199.94°F) PMCC

Upper Flammability Limit (% by volume)..... N/AV

Lower Flammability Limit (% by volume) ..... N/AV

Autoignition Temperature..... N/AV

SECTION 4 – FIRE AND EXPLOSION (cont.)

Hazardous Combustion Products.....	May generate toxic or irritating combustion products. Ammonia, Oxides of Carbon (CO, CO2), Oxides of Nitrogen.
Explosion Data:	
Sensitivity to impact.....	Protect against physical damage.
Sensitivity to Static Discharge	Take precautionary measures against static discharges.

SECTION 5 – REACTIVITY DATA

Chemical Stability.....	Yes. Product is stable in non-emergency conditions.
Incompatibility with other substances....	Yes. Oxidizing agents (i.e. perchlorates, nitrates, etc.). Mineral acids (i.e. sulphuric, phosphoric, etc.). Organic acids (i.e. acetic acid, citric acid, etc.). Reactive metals (sodium, calcium, zinc, etc.). Sodium or calcium hypochlorite. Materials reactive with hydroxyl compounds. Nitrites. Nitrosating agents.
Reactivity and under what conditions....	Caution! N-Nitrosamines, many of which are known to be powerful carcinogens, may be formed when the product comes in contact with Nitrous Acid, Nitrites, or atmospheres with high concentrations of Nitrous Oxide. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. A reaction followed by a large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause boiling, creating a splashing or splattering Hazard.
Hazardous Decomposition Products	Irritating and toxic fumes at elevated temperatures. Ammonia when heated. Nitric acid. Nitrosamines. Aldehydes. Oxides of Nitrogen. Nitrogen Oxides can react with water vapours to form corrosive Nitric Acid. The Oxides of Nitrogen Gas (except Nitrous Oxide) emitted on decomposition are highly toxic. Oxides of Carbon (CO, CO2).

SECTION 6 – TOXICOLOGICAL PROPERTIES

Route of Entry ..... Skin, eyes, inhalation, ingestion.

Effects of Acute Exposure:

Skin Contact ..... Causes chemical burns.

Skin Absorption .... Product is absorbed through skin. May cause nausea, headache and general discomfort.

Eye Contact ..... Burns of the eye may cause blindness. Product vapour in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is transient and has no known residual effect.

Inhalation..... Irritating to respiratory tract. May severely damage contacted tissue and produce scarring.

Ingestion ..... May cause bleeding of the gastrointestinal tract and vomiting of blood.

Effects of Chronic Exposure to Product.... Adverse eye effects (such as conjunctivitis or corneal damage). Adverse respiratory effects (tightness of chest, cough, shortness of breath). Allergic reaction / sensitization may occur during repeated or prolonged contact with the skin. Effects from inhalation of vapours may be delayed. Repeated and / or prolonged exposure to low concentrations of vapour may cause: sore throat, loss of consciousness, death. Adverse skin effects (such as defatting, rash, irritation or corrosion).

Exposure Limits ..... Refer to Section 2 – Hazardous Ingredients.

Irritancy of Product ..... Refer to Effects of Chronic Exposure to Product.

Carcinogenicity ..... None known.

Teratogenicity..... N/AV

Reproductive Toxicity.... None known.

Mutagenicity..... None known.

Synergistic Products ..... None known.

SECTION 7 – PREVENTATIVE MEASURES

Personal Protective Equipment:

Gloves ..... Chemical resistant gloves with a long cuff with a long cuff that will overlap the clothing sleeves should be worn when handling this product. The glove / clothing overlaps should be sealed by tape. Check with the glove manufacturer to determine the proper glove type.

Respirator .... Wear an appropriate, properly fitted vapour respirator (NIOSH / OSHA approved) during application where vapour / mist are likely to be encountered, e.g. confined spaces and during winter construction or when the substrate is preheated. For outdoor application and areas with adequate ventilation, the use of a respirator is normally not required. Follow the respirator manufacturer's recommendations. A dust respirator should be worn for any activity such as sanding or grinding of cured coating.

Eyes ..... Wear splash proof chemical safety goggles and / or face shield.

Footwear..... Wear impervious boots.

Clothing..... Long-sleeved clothing is to be worn over regular clothing to cover all exposed areas of arms, legs or torso during mixing and application of the coating. Breathable clothing, such as cotton or disposable coveralls, is recommended.

Other..... Emergency eyewash and a shower should be in close proximity, where possible. A barrier cream may be used, in conjunction with the stated protective measures, as an additional safeguard against skin contact.

Engineering Controls ... Mechanical ventilation, both dilution and exhaust may be utilized to keep exposure below the TLV. Extra ventilation should be provided in enclosed spaces.

Leak and Spill Procedure ..... Remove all sources of ignition. Wear appropriate safety equipment as listed above. Soak up spills with inert absorbent materials and place in closed containers. Prevent run-off from reaching storm or sewer drains.

Waste Disposal..... Dispose of according to Federal, Provincial, and Municipal regulations in Canada and Federal, State, and County regulations in the United States of America.

Handling Procedures and Equipment..... All equipment must be grounded. Keep container closed when not in use. Wear appropriate personal protective equipment. Maintain good personal hygiene, wash thoroughly after using, particularly before eating or going on breaks.

Storage Requirements ..... Store in a cool, dry, well-ventilated area away from incompatible materials and all sources of ignition. Keep in a tightly sealed container.

SECTION 8 – SHIPPING INFORMATION

PIN:	UN2735
Proper Shipping Name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-Dimethaneamine (MXDA)/Trimethylhexamethylenediamines)
Class:	8
Pkg.Grp.:	II
Mode:	Ground (TDG) or Air (IATA) or Ocean (IMDG)

SECTION 9 – FIRST AID MEASURES

Specific Measures:

Inhalation.....	Remove to fresh air. If breathing has stopped, a trained person should perform Artificial respiration. Get Medical attention.
Ingestion.....	Get Medical attention **IMMEDIATELY**.
Eye Contact	Flush with water for at least 15 minutes, hold eyelids apart to ensure complete irrigation of all eye and lid tissue, and get Medical attention.
Skin Contact.....	Wash with water and mild soap for at least 15 minutes. Remove contaminated clothing and wash before re-use. Get Medical attention.

CAUTION---NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SECTION 10 – PREPARATION DATE OF MSDS

Prepared by.....	Technical Department of Specialty Polymer Coatings, Inc. with information provided by suppliers of raw materials used in the manufacture of SP-2831 Brush Grade Hardener.
Phone Number.....	(604) 514-9711
Preparation Date....	December 13, 2007
Revision Date.....	December 18, 2009

NOTE: While Specialty Polymer Coatings, Inc. believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Specialty Polymer Coatings, Inc. assumes legal responsibility. The data is offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, Provincial / State, and Municipal / County laws and regulations.

ABBREVIATIONS USED IN PREPARING THIS MSDS

% - Percent # - Number < - Less Than > - Greater Than @ - At

ACGIH	American Conference of Governmental Industrial Hygienists
C	Centigrade
C.A.S. #	Chemical Abstract Number
CEIL	Ceiling Limit
CEPA	Canadian Environmental Protection Agency
CFR	Code of Federal Regulations
DOT	Department of Transportation
DSL	Domestic Substance List
Derm-LD50	Dermal Lethal Dose - 50% Death
F	Fahrenheit
FP	Flash Point
g/kg	Grams/kilogram
HMIS	Hazardous Material Information System
IARC	International Agency for Research on Cancer
IATA	International Air Transportation Authority
IMDG	International Marine Dangerous Good
Inhal-LC50	Inhalation Lethal Concentration - 50% Death
Kg	Kilogram
Lb/gal	Pounds per Gallon
LEL	Lower Explosion Limit
Lethal Conc	Lethal Concentration (50% Death)
Lethal Dose	Lethal Dosage (50% Death)
ml/kg	Millilitres/kilogram
mg/L	Milligrams per Litre
mg/M3	Milligrams per Meter Cubed
mm/Hg	Millimeters of Mercury
N/AP	Not Applicable
N/AV	Not Available
N/D	Not Determined
NFPA HAZARD RATING	4 - Extreme, 3 - High, 2 - Moderate, 1 - Slight, 0 - None, X - Blank
NIOSH	National Institute of Occupational Safety & Health
NTP	National Toxicology Program
Oral-LD50	Oral Lethal Dose-50% Death
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PIN	Product Identification Number
Pkg.Grp	Packing Group
PMCC	Pensky-Martens Closed Cup
ppm	Parts per million
SARA	Superfund Amendments & Reauthorization Act (1986)
SETA	Setaflash Closed Tester
STEL	Short Term Exposure Limit
TDG	Transportation of Dangerous Goods Act and Pursuant Regulations
TLV	Threshold Limit Value
TWA	Time Weighted Average
TSCA	Toxic Substances Control Act
WHMIS	Workplace Hazardous Material Information System