MATERIAL SAFETY DATA SHEET

WHMIS HAZARD: D2B, D2A

SECTION 1 - PRODUCT IDENTIFICATION AND USE

Product Identifier ..... **SP-2888® R.G. BRUSH GRADE BASE WHITE**

Product Code..... **850-280**

Product Use..... EXTERIOR COATING FOR PIPELINES.

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

Street Address ..... #101 - 20529 - 62nd Avenue City/Province: Langley, B.C.

Postal Code V3A 8R4

Emergency Telephone Number... CANUTEC: (613) 996-6666

INFORMATION NUMBER..... (604) 514-9711

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

Street Address ..... #101 - 20529 - 62nd Avenue City/Province: Langley, B.C.

Postal Code V3A 8R4

Emergency Telephone Number... CANUTEC: (613) 996-6666

INFORMATION NUMBER..... (604) 514-9711

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Ingredients	**%**	**C.A.S. #**	**Lethal Dose 50% species & route**	**Lethal Conc. 50% species & route**	**TLV TWA-ACGIH**
Liquid Epoxy Resin	10-30	25068-38-6	3000 mg/kg Rat Oral	N/AV	N/AV
Liquid Epoxy Resin	10-30	28064-14-4	4000 mg/kg Rabbit	6000 mg/kg Rat	N/AV
Titanium Dioxide	5-10	13463-67-7	N/AV	N/AV	10 mg/M3
Feldspar	15-40	68476-25-5	N/AV	N/AV	10 mg/M3 Total Dust
Potassium Alumino Silicate	3-7	12001-26-2	N/AV	N/AV	3 mg/M3
Modified Diglycidyl Ether	5-10	68909-14-8	N/AV	N/AV	N/AV
Crystalline Silica (Quartz)	3-7	14808-60-7	N/AV	N/AV	0.05 mg/M3 Respirable
Siloxanes and Silicones Reaction Products with Silica	1-5	67762-90-7	N/AV	N/AV	10 mg/M3
Aliphatic Polyolpolyglycidyl Ether	1-5	37237-76-6	N/AV	N/AV	N/AV

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

SECTION 3 - PHYSICAL DATA

Physical State	Liquid.
Odour and Appearance	Viscous liquid, white colour.
Odour Threshold (ppm)	N/AV
Vapour Pressure (mm/Hg)	N/AV
Vapour Density (air=1)	N/AV
Evaporation Rate (butyl acetate=1)	N/AV
Boiling Point	>300°C (572°F)
Freezing Point	N/AP
pH	N/AV
Specific Gravity (water=1)	1.55
Coefficient of water/oil distribution	N/AV
Solubility in water (20°C / 68°F)	Negligible.

SECTION 4 - FIRE AND EXPLOSION

Flammability	Not flammable as per WHMIS.
Flammability: If Yes, under which conditions?	Excessive heat, sparks, and open flame. In contact with incompatible substances. Surrounding fire.
Means of extinction	Dry Chemical, foam, Carbon Dioxide, water spray.
Special Procedures	Firefighters should wear the usual protective gear. Use Self-Contained Breathing Apparatus.
Flash Point and Method	>100°C (212°F) SETA
Upper Flammability Limit (% by volume)	N/AV
Lower Flammability Limit (% by volume)	N/AV
Autoignition Temperature	N/AV
Hazardous Combustion Products	Oxides of Carbon (CO, CO2), Oxides of Nitrogen, Aldehydes, Acids.
Explosion Data:	
Sensitivity to impact	N/AP
Sensitivity to Static Discharge	N/AP

SECTION 5 - REACTIVITY DATA

Chemical Stability	Yes. Product is stable in non-emergency conditions.
Incompatibility with other substances	Yes. Oxidizing agents, acids, bases, amines.
Reactivity and under what conditions	Elevated temperatures.
Hazardous Decomposition Products	Oxides of Carbon, Oxides of Nitrogen, Aldehydes, and Acids.

SECTION 6 - TOXICOLOGICAL PROPERTIES

Route of Entry	Skin, eyes, inhalation, ingestion.
Effects of Acute Exposure:	
Skin Contact	May cause skin burns. May cause allergic skin reactions.
Skin Absorption	Can be absorbed through the skin.
Eye Contact	Causes eye irritation.
Inhalation	May cause nose and throat irritation. May cause lung injury and / or burns.
Ingestion	Harmful if swallowed.
Effects of Chronic Exposure to Product	May cause lung damage, skin sensitization, dermatitis, and respiratory sensitization. Excessive inhalation of respirable crystalline silica dust may cause lung disease, silicosis, with symptoms of cough, shortness of breath, and reduced pulmonary function. After installation and drying, activities such as grinding or sanding of material may cause dust concentration to be above the TLV limit for crystalline quartz.
Exposure Limits	Refer to Section 2 - Hazardous Ingredients.
Irritancy of Product	Refer to Effects of Chronic Exposure to Product.
Carcinogenicity	IARC has determined that crystalline silica is carcinogenic to humans (Group 1) if it is inhaled in the form of quartz or cristobalite from occupational sources. NTP classifies respirable crystalline silica as “known to be a human carcinogen”. ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2).
Teratogenicity	None Known.
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 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 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

Proper Shipping Name .... NOT REGULATED

CLASS/PIN/Pkg.Grp ..... N/AP

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-2888® R.G. Brush Grade Base White.

Phone Number..... (604) 514-9711

Preparation Date.... May 19, 1998

Revision Date..... January 8, 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	Packaging 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

MATERIAL SAFETY DATA SHEET

WHMIS HAZARD: D2A, D2B, E

SECTION 1 – PRODUCT IDENTIFICATION AND USE

Product Identifier ..... **SP-2888® R.G. BRUSH HARDENER BLUE**

Product Code..... **850-286**

Product Use ..... Curing Agent for SP-2888® R.G. Brush Grade Base White.

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

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

Postal Code V3A 8R4

Emergency Telephone Number... CANUTEC: (613) 996-6666

INFORMATION NUMBER..... (604) 514-9711

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

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

Postal Code V3A 8R4

Emergency Telephone Number... CANUTEC: (613) 996-6666

INFORMATION NUMBER..... (604) 514-9711

SECTION 2 – HAZARDOUS INGREDIENTS

Hazardous Ingredients	**%**	**C.A.S. #**	**Lethal Dose 50% Species & route**	**Lethal Conc. 50% Species & route**	**TLV TWA-ACGIH**
Aminoethylpiperazine	10-30	140-31-8	2140 mg/kg Rat Oral 880 mg/kg Rabbit Dermal	N/AV	N/AV
Bisphenol A	5-15	80-05-7	2230 mg/kg Rat Oral 3000 mg/kg Rabbit Dermal	N/AV	N/AV
Nonylphenol	3-7	25154-52-3	1231 mg/kg Mouse Oral 2140 mg/kg Rabbit Dermal	N/AV	N/AV
Benzyldimethylamine	1-5	103-83-3	265 mg/kg Rat Oral 1660 mg/kg Rabbit Dermal	1800 mg/M3/2H Mouse	N/AV
1,2 Diaminocyclo Hexane	1-10	694-83-7	N/AV	N/AV	N/AV
Benzyl Alcohol	5-15	100-51-6	1230 mg/kg Rat Oral 2000 mg/kg Rabbit Dermal	N/AV	N/AV
2,4,6 Tris Phenol (Dimethylaminomethyl)	1-5	90-72-2	1200 mg/kg Rat Oral 1280 mg/kg Rat Dermal	N/AV	5 ppm
Hexamethylenediamine	0.1-1.0	124-09-04	750 mg/kg Rat Oral 1110 mg/kg Rabbit Dermal	N/AV	0.5 ppm
Paratertiarybutylphenol	1-5	98-54-4	3250 mg/kg Rat Oral 2520 mg/kg Rabbit Dermal	N/AV	N/AV
Diethylene Triamine	5-15	111-40-0	1080 mg/kg Rat Oral 1090 mg/kg Rabbit Dermal	N/AV	1 ppm Skin
Benzene-1,3-Dimethaneamine	1-10	1477-55-0	930 mg/kg Rat Oral 2000 mg/kg Rabbit Dermal	700 ppm/1H/Rat	0.1 mg/M3 Cel

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

SECTION 3 – PHYSICAL DATA

Physical State	Liquid.
Odour and Appearance.....	Ammoniacal, blue liquid.
Odour Threshold (ppm)	N/AV
Vapour Pressure (mm/Hg)	5.5 at 21°C (70°F)
Vapour Density (air=1)	N/AV
Evaporation Rate (butyl acetate=1)	N/AV
Boiling Point	>107°C (225°F)
Freezing Point	N/AV
pH.....	Alkaline.
Specific Gravity (water=1).....	1.07 @ 25°C (77°F)
Coefficient of water/oil distribution.....	N/AV
Solubility in water (20°C / 68°F)	Slight (0.1-1%).

SECTION 4 – FIRE AND EXPLOSION

Flammability	Not flammable as per WHMIS.
Flammability: If Yes, under which conditions?...	Excessive heat, sparks and open flame. Surrounding fire.
Means of extinction.....	Water spray or alcohol foam. In case of small fire use Carbon Dioxide, dry chemical, dry sand or limestone.
Special Procedures	Firefighters should wear the usual protective gear. Use Self-Contained Breathing Apparatus.
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
Hazardous Combustion Products	May generate toxic, irritating or flammable combustion products, Oxides of Nitrogen, Carbon (CO, CO2).

Explosion Data:

Sensitivity to Impact	Protect against physical damage.
Sensitivity to Static Discharge	Not expected, but precautionary measures against static discharge should be observed.

SECTION 5 – REACTIVITY DATA

Chemical Stability.....	Yes. Product is stable in non-emergency conditions.
Incompatibility with other substances....	Yes. Strong acids, oxidizing agents (perchlorates, nitrates), Sodium or Calcium Hypochlorite.
Reactivity and under what conditions....	Product slowly corrodes copper, aluminum, zinc, and galvanized surfaces. Contact with incompatible substances. Excessive heat.
Hazardous Decomposition Products	Refer to Section 4 – Hazardous Combustion Products.

SECTION 6 – TOXICOLOGICAL PROPERTIES

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

Effects of Acute Exposure:

Skin Contact.....	Causes chemical burns. Severe irritant. May cause allergic skin reaction.
Skin Absorption	Product is absorbed through skin. May cause nausea, headache, and general discomfort.
Eye Contact.....	Severe irritant. Burns of eyes may cause blindness. Corrosive to the eyes.
Inhalation	Severe respiratory tract irritant, may severely damage contacted tissue and produce scarring.
Ingestion.....	Harmful if swallowed. May cause death unless treated promptly.
Effects of Chronic Exposure to Product	Adverse eye, skin, and respiratory effects. Sensitization may occur on prolonged contact with skin.
Exposure Limits	Refer to Section 2 – Hazardous Ingredients.
Irritancy of Product	Refer to Effects of Acute Exposure.
Carcinogenicity	None Known.
Teratogenicity	None Known.
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 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 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. (Aminoethylpiperazine/Diethylene Triamine)
Class:	8
Pkg.Grp.:	III
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-2888® R.G. Brush Hardener Blue.
Phone Number.....	(604) 514-9711
Preparation Date.....	August 28, 1998
Revision Date.....	March 19, 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