SECTION 1 – PRODUCT / SUBSTANCE AND COMPANY IDENTIFICATION

Product Name: ChemLine TDC

Product Number: N/A

Manufacturer: Advanced Polymer Coatings, LLC

Address: 951 Jaycox Rd. --- Avon, Ohio 44011 U.S.A.

Phone Number: {+01} 440 / 937-6218 [toll free 800-334-7193]

Fax Number: {+01} 440 / 937-5046 [toll free 800-615-0233]

CHEMTREC: {+01} 730 / 527-3887 [toll free 800-424-9300]

C.A.S. Chemical Name: Polyglycidal Ether of Poly (4-Hydroxystyrene B)

Synonyms: 4-Glycidal Ether Phenyl Methyl Carbinol Homopolymer

Intended Use: See Technical Data Sheet. For Professional Use Only.

Application Method: See Application Specifications. For Professional Use Only.

Previous Revision Date: September 1, 2008

HMIS Health Rating 2 **Flammability** 2 **Reactivity** 0

SECTION 2 – COMPOSITION / INFORMATION OF INGREDIENTS

#	Chemical Name	CAS Number	%
1.	Polyglycidyl Ether of PHS-N	267414-21-1	40.0 – 75.0
2.	Ceramic Microspheres	14808-60-7	20.0 – 45.0
3.	Xylene	1330-20-7	2.0 – 5.0
4.	Toluene	108-88-3	1.0 – 4.0
5.	Titanium Dioxide (present in white or gray color only)	13463-67-7	< 3.0

OSHA (ACGIH) Exposure Limits

	PEL		TLV		TWA	
	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
1.	N/E	N/E	N/E	N/E	N/E	N/E
2.	N/E	N/E	N/E	N/E	N/E	N/E
3.	100	----	100	----	100	----
4.	200	----	50	188	100	----
5.	N/E	N/E	N/E	N/E	N/E	N/E

N/E = Not Established

SECTION 3 – HAZARD IDENTIFICATION

Hazards: Harmful if swallowed. Moderate eye irritant.
Skin irritant. May cause skin sensitization.
Moderate respiratory tract irritant.

Extinguishing Media: Carbon Dioxide (CO_2), Foam, Dry Chemical or Water Fog

Routes of Exposure Ingestion
Eye Contact
Skin Contact

Exposure Standards No standards established for the product. Maintain air contaminant concentrations in the workplace at the lowest feasible levels.

Health Hazards Harmful if swallowed. Moderate respiratory tract irritant.
Corrosive to eyes. Severe eye irritant.
Severe skin irritant. May cause skin sensitization.

Target Organs Eye, Skin, Respiratory system

Signs and Symptoms of Exposure (Acute effects)

Inhalation of vapors may cause irritation in the respiratory tract.

Contact of undiluted product with: Eyes; moderately irritating
Skin; mildly irritating to skin, prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis.

Signs and Symptoms of Exposure (Possible longer term effects)

Repeated and or prolonged exposure may cause allergic reaction and sensitization.

Repeated and or prolonged exposure may result in: adverse respiratory effects (such as cough, tightness of chest or shortness of breath), adverse skin effects (such as rash, irritation or dermatitis).

Medical Conditions Generally Aggravated by Exposure

Chronic respiratory disease (e.g. Asthma, Bronchitis, Emphysema)
Eye disease. Skin disorders and Allergies.

Carcinogens Under OSHA, ACGIH, NTP, IARC, Other

This product contains no carcinogens in concentrations of 0.1 percent or greater.

SECTION 4 – FIRST AID MEASURES

Eye Contact

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

Skin Contact

Remove product and immediately wash affected area with soap and water. Rinse thoroughly. Remove contaminated clothing and shoes. Launder contaminated clothing prior to reuse. If necessary - seek medical advice.

Inhalation

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.

Ingestion

If conscious, administer water to drink - DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Seek medical advice.

Note to Physician

Treat symptomatically as required by the condition of the patient.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point (closed cup)	154°F. (68°C.)
Flammable Limits in Air:	Lower: 1
% by Volume	Upper: 7
Autoignition Temperature	997°F. (535°C.)

Extinguishing Media

Carbon Dioxide (CO_2), Foam, Dry Chemical or Water Fog

Fire Fighting Instructions

Isolate the hazard and evacuate the area. As best as possible, stay upwind and fight the fire from the maximum distance. Use water spray to cool containers and fire exposed surfaces. Shut off fuel to fire if possible without hazard.

Fire Fighting Equipment

Wear self-contained breathing apparatus. Wear a face shield. Wear complete personal protective equipment including butyl rubber boots, gloves, and body suit.

Unusual Fire and Explosion Hazards

None known, handle as a combustible liquid.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:

Avoid eye or skin contact. Shut off or remove all ignition sources. Stop the leak, if possible. Construct a dike to prevent spreading. In case of a major spill or spillage in a confined space evacuate the area. Check solvent vapor levels before re-entering.

Clean-Up Procedures

Absorb spillage with non-reactive, non-combustible materials, e.g. dry soil, sand, vermiculite. Place in appropriate chemical waste container. Incinerate under controlled conditions and dispose of in an approved landfill. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing.

Other Emergency Advice

Wear protective clothing, boots, gloves, and eye protection.

SECTION 7 – HANDLING AND STORAGE

Storage

Handle containers carefully to prevent damage and spillage.
Material should be kept in original containers.
Keep in cool, dry, ventilated storage and in closed container.
Smoking, high heat and open flames should not be permitted in storage areas.
Storage area to be adequately ventilated.

Handling

Avoid contact with skin or eyes.
Avoid breathing of vapors.
Use personal protection as shown in Section 8.
Handle in well-ventilated workspace.
When handling, do not eat, drink or smoke.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

General Ventilation:	Required in both external and enclosed areas.	
Local Exhaust:	**External Areas:**	Recommended
	Enclosed Areas:	Required

Respiratory Protection:	**External Areas:**	Gas & Vapor removing, air purifying respirator (cartridge)
	Enclosed Areas:	Full face, positive pressure demand type (supplied air mask)
Eye Protection	Chemical goggles or full face shield and safety glasses with side shields	
Hand Protection	Impermeable gloves. Neoprene rubber gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves.	
Protective Clothing	Impervious clothing. Tyvek or Saranex Suit.	
Engineering Controls	No specific controls needed.	
Work and Hygienic Controls	Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking, or using the toilet. Promptly remove clothing that becomes contaminated. Discard saturated leather articles.	

SECTION 9 – TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

Physical Form	Mobile liquid
Color (standard)	White, Gray or Red (based on pigment)
Odor	Aromatic benzene-like odor
pH	CA. 7
Specific Gravity (H_2O = 1.0)	1.41
Decomposition Temperature:	240°C.
Solubility in Water	Insoluble
Percent Volatiles by Volume:	11% (±3%)
Viscosity:	6,000 cPs (±1,000)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Avoid storage at elevated temperatures
Incompatibility (Materials to Avoid):	Strong Oxidizers, acids and caustics
Hazardous Polymerization:	Will autopolymerize at very high temperatures
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide

SECTION 11 – TOXICOLOGICAL PROPERTIES

Acute Oral Toxicity (LD 50, Rat)	5,000 mg/kg (estimated, no deaths)
Acute Dermal Toxicity (LD 50, Rabbit)	8,000 mg/kg (estimated, no deaths
Acute Inhalation Toxicity (LC 50, Rat)	No deaths after 8 hour exposure to vapor
Other Acute Effects	No Data
Irritation Effects Data	U.S. EPA – Moderate Irritant (Category III) EU -- Irritant for Skin

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity	No Data on product itself
Environmental Fate	No Data on product itself
Additional Information	This product should not be allowed to enter drains or water courses.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal	Comply with all Federal, State and Local Regulations.
Disposal Methods	Incinerate under controlled conditions according to Federal, State and Local Environmental Regulations. Dispose of in an approved landfill.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Class	Not Regulated
RCRA Status	Not a Hazardous Waste under RCRA (40 CFR 261)
CERCLA Status	Not Listed
IMO Shipping Data	Refer to Bill of Lading
ICAO/IATA Shipping Data	Refer to Bill of Lading

SECTION 15 – REGULATORY INFORMATION

US FEDERAL REGULATIONS

Toxic Substance Control Act (TSCA)

All components are included in the EPA TSCA Chemical Substance Inventory.

OSHA Hazard Communication Standard (29 CFR 1910.1200) *hazard class(es)*
Irritant. Sensitizer.

STATE REGULATIONS
Proposition 65 Substances (*component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"*)
None

New Jersey Trade Secret Registry Number(s)
None

CANADA
WHMIS Hazard Classification No Information Available

EUROPEAN ECONOMIC COMMUNITY (EEC)

EEC Symbol	Harmful (Xn)
EEC Risk (R) Phrases	May cause sensitization by skin contact (R43). Irritating to eyes, respiratory system, and skin (R36/37/38). Harmful if swallowed (R22).
EEC Safety Phrases	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26). Wear suitable protective clothing, gloves and eye/face protection (S36/37/39). In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) (S45).

SECTION 16 – OTHER INFORMATION

The information on this MSDS is based upon the present state of our knowledge and on current laws and regulations.

This product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

SECTION 1 – PRODUCT / SUBSTANCE AND COMPANY IDENTIFICATION

Product Name:	ChemLine TDC
Product Number:	Catalyst 31
Manufacturer:	Advanced Polymer Coatings, LLC
Address:	951 Jaycox Rd. -- Avon, Ohio 44011 U.S.A.
Phone Number:	{+01} 440 / 937-6218 [toll free 800-334-7193]
Fax Number:	{+01} 440 / 937-5046 [toll free 800-615-0233]
CHEMTREC:	{+01} 703 / 527-3887 [toll free 800-424-9300]

C.A.S. Chemical Name:	Imidazoles
Synonyms:	None
Intended Use:	See Technical Data Sheet. For Professional Use Only.
Application Method:	See Application Specifications. For Professional Use Only.
Previous Revision Date:	September 1, 2008

HMIS Health Rating 2 **Flammability** 1 **Reactivity** 0

SECTION 2 – COMPOSITION / INFORMATION OF INGREDIENTS

1. **Blend of Imidazoles** C.A.S. 931-36-2/616-47-7 100%
   Chemical Identity Trade Secret

OSHA (ACGIH) Exposure Limits

		TWA		STEL		Ceiling	
		ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
1.	OSHA	N/E	N/E	N/E	N/E	N/E	N/E
	ACGIH	N/E	N/E	N/E	N/E	N/E	N/E

N/E = Not Established

SECTION 3 – HAZARD IDENTIFICATION

Routes of Exposure
Ingestion
Eye Contact
Skin Contact
Skin Absorption
Inhalation

Exposure Standards No standards established for the product. Maintain air contaminant concentrations in the workplace at the lowest feasible levels.

Health Hazards	Harmful if swallowed. Corrosive to eyes. Severe eye irritant. Corrosive to skin. Severe skin irritant. May cause skin sensitization. Toxic (ANSI Z129.1 1988) by skin absorption.
Target Organs	Eye Skin
Extinguishing Media:	Ignition will give rise to Class B fire. In case of large fire use: alcohol foam, water spray In case of small fire use: carbon dioxide (CO_2), dry chemical, dry sand or limestone.

Signs and Symptoms of Exposure (Acute effects)

Product vapor 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 may cause blindness. Inhalation of vapors may cause irritation in the respiratory tract. Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury.

Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring.

Product is absorbed through the skin and may cause nausea, headache and general discomfort.

Risk of exposure to hazardous concentrations of vapor under normal working conditions in a well-ventilated space is minimal. However, conditions such as spraying or sudden release of hot liquid, which generate an aerosol, mists or fog should be avoided.

Signs and Symptoms of Exposure (Possible longer term effects)

Repeated and/or prolonged exposure may cause allergic reaction and sensitization.
Repeated and/or prolonged exposure may result in: adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion).
Repeated and/or prolonged exposure to low concentrations of vapor may cause: eye irritation which are transient.

Medical Conditions Generally Aggravated by Exposure

Eye disease. Skin disorders and Allergies.

Carcinogens Under OSHA, ACGIH, NTP, IARC, Other

This product contains no carcinogens in concentrations of 0.1 percent or greater.

SECTION 4 – FIRST AID MEASURES

Eye Contact

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

Skin Contact

Remove product and immediately flush affected area with water for at least 15 minutes. Remove contaminated clothing and shoes. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. DO NOT APPLY GREASE OR OINTMENTS. Control shock, if present. Launder contaminated clothing prior to reuse.

Inhalation

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.

Ingestion

If conscious, administer 3-4 glasses of milk or water. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Seek medical advice.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point (closed cup)	>100.00 ^{o}C
Upper Explosion Limit (UEL)	No Data
Lower Explosion Limit (LEL)	No Data
Autoignition Temperature	No Data

Fire Hazard Classification (OSHA/NFPA)

Class IIIB

Extinguishing Media

Ignition will give rise to Class B fire. In case of large fire use: alcohol foam, water spray. In case of small fire use: carbon dioxide (CO_2), dry chemical, dry sand or limestone.

Special Fire Fighting Procedures

A face shield should be worn. Firefighters should wear butyl rubber boots, gloves, and body suit and a self-contained breathing apparatus. Retain expended liquids from fire fighting for later disposal. Water spray may be used to cool closed containers exposed to fire.

Unusual Fire and Explosion Hazards

May generate toxic or irritating combustion products. Contact of liquid with skin must be prevented. Sudden reaction and fire may result if product is mixed with an oxidizing agent. May generate carbon monoxide gas. Personnel in vicinity and downwind should be evacuated.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Containment Techniques (Removal of ignition sources, diking, etc.)

Shut off or remove all ignition sources. Stop the leak, if possible. Reduce vapor spreading with a water spray. Construct a dike to prevent spreading (includes molten liquids until they freeze). Protect workers with water spray. Ventilate the space involved.

Clean-Up Procedures

If necessary recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

Other Emergency Advice

Open enclosed areas to outside atmosphere. Wear protective clothing, boots, gloves, and eye protection.

SECTION 7 – HANDLING AND STORAGE

Storage

Keep away from oxidizers, heat, flames, sparks.
Handle containers carefully to prevent damage and spillage.
Material should be kept in original containers.
Keep in cool, dry, ventilated storage and in closed container.
Smoking, high heat and open flames should not be permitted in storage areas.
Storage area to be adequately ventilated.

Handling

Avoid contact with skin or eyes.
Handle in well-ventilated workspace.
Use personal protection as shown in Section 8.
When handling, do not eat, drink or smoke.
Remove all equipment which may be a source of ignition.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls	Explosion proof and general local exhaust.
Eye Protection	Full face shield with goggles underneath
Hand Protection	Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves.
Respiratory Protection	Gas and vapor removing, air purifying respirator (cartridge)
Protective Clothing	Impervious clothing. Slicker suit. Rubber boots. Full rubber suit (rain gear). Butyl or latex protective clothing.
Work and Hygienic Controls	Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking, or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles, which may be saturated or unable to be cleaned.

SECTION 9 – TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Mobile Liquid
Color:	Straw Yellow
Odor:	Amine, Amoniacal
pH	Alkaline
Vapor Pressure (mm Hg at 21 ^{o}C (70 ^{o}F))	No Data
Vapor Density (Air = 1)	No Data
Boiling Point	> 100.00^{o}C
Melting Point	No Data
Solubility in Water	> 60%
Specific Gravity (H_20 = 1.0)	1.01

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions to Avoid (if unstable)	Not Applicable

Incompatibility (Materials to Avoid)	Oxidizing agents (i.e. perchlorates, nitrates, etc.). Sodium or calcium Hypochlorite. Heat. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
Hazardous Decomposition Products (from burning, heating or reaction with other materials)	Carbon monoxide in a fire. Carbon dioxide in a fire. Irritating and toxic fumes at elevated temperatures.
Hazardous Polymerization	Will not occur

SECTION 11 – TOXICOLOGICAL PROPERTIES

Acute Oral Toxicity (LD 50, Rat)	> 1000.00 mg/kg
Acute Dermal Toxicity (LD 50, Rabbit)	> 400.00 mg/kg (No deaths)
Acute Inhalation Toxicity (LC 50, Rat)	No Data
Other Acute Effects	No Data
Irritation Effects Data	Severe irritant and corrosive to the eyes of a rabbit. Severe irritant to the skin of a rabbit.
Chronic/Subchronic Data	No delayed, subchronic or chronic test data are known.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity	No Data
Environmental Fate	No Data
Additional Information	No Data

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Comply with all Federal, State and Local Regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Non-Bulk Shipping Name	Corrosive liquids, n.o.s. // 8 // UN2735 // PG II
DOT Bulk Shipping Name	Refer to Bill of Lading
IMO Shipping Data	Refer to Bill of Lading
ICAO/IATA Shipping Data	Corrosive liquids, n.o.s. // 8 // UN2735 // II

SECTION 15 – REGULATORY INFORMATION

US FEDERAL REGULATIONS

Toxic Substance Control Act (TSCA)
All components are included in the EPA TSCA Chemical Substance Inventory.

OSHA Hazard Communication Standard (29 CFR 1910.1200) *hazard class(es)*
Corrosive. Irritant.

EPA SARA Title III Section 312 (40 CFR 370) *hazard class*
Immediate health hazard.

EPA SARA Title III Section 313 (40 CFR 372) *toxic chemicals above "de minimis" level are*:
None.

STATE REGULATIONS

Proposition 65 Substances (*component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"*) ----- None

New Jersey Trade Secret Registry Number(s) ----- None

CANADA

DSL	Included on Inventory
WHMIS Hazard Classification	Class D Division 2B, Class E Corrosive
WHMIS Trade Secret Registry Number(s)	None
WHMIS Symbols	Test tube/hand, Stylized T

EUROPEAN ECONOMIC COMMUNITY (EEC)

EINECS/ELINCS Master Inventory	Included on Inventory
EEC Symbol	Corrosive (C), Harmful (Xn)
EEC Risk (R) Phrases	Harmful if swallowed (R22). Harmful in contact with skin (R21). Causes burns (R34). Risks of serious damage to eyes (R41).
EEC Safety Phrases	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26). Wear suitable protective clothing, gloves and eye/face protection (S36/37/39). In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) (S45).

AUSTRALIA

AICS	Included on Inventory

SECTION 16 – OTHER INFORMATION

The information on this MSDS is based upon the present state of our knowledge and on current laws and regulations.

This product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.