

**TUFCOAT DBS CLEAR PART A**Version 1
REVISION DATE: 07/07/2005

Print Date 07/13/2007

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : TUFCOAT DBS CLEAR PART A
 Product code : 14298A 99

COMPANY : Euclid Chemical Company
 19218 Redwood Road
 Cleveland, OH 44110

Telephone : 1-800-321-7628
 Emergency Phone: : U.S. only: 1-800-255-3924
 International Users Call Collect: 1-813-248-0585

SECTION 2 - HAZARDS IDENTIFICATION**Emergency Overview**

Amber. Liquid solution. Vapor may irritate respiratory tract. May cause nausea, headaches, and dizziness. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : Vapor may irritate respiratory tract. May cause nausea, headaches, and dizziness.
 Eyes : Direct contact may cause mild irritation. May cause temporary injury.
 Ingestion : May cause gastrointestinal irritation, nausea, and vomiting.
 Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Prolonged or repeated exposure to epoxy resin can cause irritation to skin, eyes, skin sensitization, temporary eye injury. Certain epoxy resins are reported to be mutagenic in some laboratory tests. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Skin, Eye, Ingestion, Lung

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Epichlorohydrin polymer	25068-38-6	> 60.0
Alkyl glycidyl ether	68609-96-1	7.0 - 13.0
Diisopropylbiphenyl	69009-90-1	3.0 - 7.0
Triisopropylbiphenyl	29225-91-0	1.0 - 5.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation : Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get



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- medical attention.
- Eye contact : Flush with water for 15 minutes. If irritation persists, get medical attention.
- Skin contact : Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
- Ingestion : Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

- Flash point : 200 °F, 93 °C
- Method : Setaflash Closed Cup
- Lower explosion limit : Not available.
- Upper explosion limit : Not available.
- Autoignition temperature : Not available.
- Extinguishing media : If water fog is ineffective, use carbon dioxide, dry chemical or foam.
- Hazardous combustion products : Smoke, fumes. Carbon monoxide and carbon dioxide can form.
- Protective equipment for firefighters : Water may be used to cool containers to minimize pressure build-up. Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
- Fire and explosion conditions : Closed container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors. Vapor concentrations in enclosed areas may ignite explosively. Vapors may travel to sources of ignition and flashback.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Store under dry warehouse conditions away from heat and all ignition sources. Store in a cool, well ventilated area. Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Do not smoke, weld, generate sparks, or use flame near container. Change soiled work clothes frequently. Clean hands thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment



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- Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved organic vapor or supplied air respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Chemical splash goggles.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use general ventilation and/ or local exhaust to reduce the airborne contaminant concentration below the exposure limit listed in the MSDS

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid solution
- Color : Amber
- Odor : Solvent
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Heavier than air
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : Not available.
- Water solubility : Negligible
- Specific Gravity : 1
- % Volatile Weight : 0 %

SECTION 10 - REACTIVITY / STABILITY

- Substances to avoid : Epoxy curing agents. Amines and oxidizing agents.
- Stability : Material is stable under normal storage, handling, and use.
- Hazardous polymerization : Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

No Data Available

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SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Recycle or dispose of in compliance with local, provincial and federal regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA**TDG / DOT Shipping Description:**

NOT REGULATED

SECTION 15 - REGULATORY INFORMATION**North American Inventories:**All components are listed or exempt from the TSCA inventory.
One or more components are listed on the NDSL.**U.S. Federal Regulations:**

SARA 313 Components : None present or none present in regulated quantities.

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :

OSHA Status: Considered : Irritant
hazardous based on the
following criteria:

OSHA Flammability : Not Regulated

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
39 g/l**U.S. State Regulations:**

Penn RTK Components	:	Epichlorohydrin polymer	25068-38-6
		Alkyl glycidyl ether	68609-96-1
		Diisopropylbiphenyl	69009-90-1

NJ RTK Components	:	Epichlorohydrin polymer	25068-38-6
		Alkyl glycidyl ether	68609-96-1
		Diisopropylbiphenyl	69009-90-1
		Triisopropylbiphenyl	29225-91-0

Chemicals known to the State of California to cause cancer birth defects and/or other reproductive harm:
100-41-4 Ethylbenzene



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SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	2
Reactivity	0
PPE	

0 = Minimum
 1 = Slight
 2 = Moderate
 3 = Serious
 4 = Severe

Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

- ACGIH - American Conference of Governmental Hygienists
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- DOT - Department of Transportation
- DSL - Domestic Substance List
- EPA - Environmental Protection Agency
- HMIS - Hazardous Materials Information System
- IARC - International Agency for Research on Cancer
- MSHA - Mine Safety Health Administration
- NDSL - Non-Domestic Substance List
- NIOSH - National Institute for Occupational Safety and Health
- NTP - National Toxicology Program
- OSHA - Occupational Safety and Health Administration
- PEL - Permissible Exposure Limit
- RCRA - Resource Conservation and Recovery Act
- RTK - Right To Know
- SARA - Superfund Amendments and Reauthorization Act
- STEL - Short Term Exposure Limit
- TLV - Threshold Limit Value
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average
- V - Volume
- VOC - Volatile Organic Compound
- WHMIS - Workplace Hazardous Materials Information System

**TUFCOAT DBS CLEAR PART B**Version 1.1
REVISION DATE: 03/24/2008

Print Date 03/25/2008

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : TUFCOAT DBS CLEAR PART B
 Product code : 14298B 99

COMPANY : Euclid Chemical Company
 19218 Redwood Road
 Cleveland, OH 44110

Telephone : 1-800-321-7628
 Emergency Phone: : U.S. only: 1-800-424-9300
 International Users Call Collect: 1-703-527-3887

Product use : Curative

SECTION 2 - HAZARDS IDENTIFICATION**Emergency Overview**

Amber. Liquid. May cause slight irritation to the respiratory system. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause slight irritation to the respiratory system.
 Eyes : Vapors or liquid may cause tearing, blurred vision, severe irritation, and possible chemical burns.
 Ingestion : May cause gastrointestinal irritation, nausea, and vomiting. May cause chemical burns to stomach, mouth, nose, and throat.
 Skin : May cause itching, reddening, inflammation. May cause severe burns, blistering and skin damage. May cause sensitization resulting in irritation, itching and redness. May cause a rash.

Aggravated Medical Conditions

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

May cause sensitization by contact. Prolonged skin contact may cause irritation, burns or dermatitis. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. May aggravate persons sensitized to amines. Repeated inhalation of nonyl phenol may cause lung damage. Repeated skin contact with nonyl phenol may cause skin irritation and dermatitis. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Benzyl alcohol	100-51-6	15.0 - 40.0
Isophoronediamine	2855-13-2	15.0 - 40.0

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Amine-Epoxy Resin	NJ TSRN# 51721300-5468P	15.0 - 40.0
4-Nonylphenol	84852-15-3	10.0 - 30.0
m-Xylenediamine	1477-55-0	10.0 - 30.0
Polyethylene glycol ether	9014-85-1	3.0 - 7.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation	:	Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel.
Eye contact	:	Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
Skin contact	:	Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	:	Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point	:	200 F, 93 C
Method	:	Setaflash Closed Cup
Lower explosion limit	:	Not available.
Upper explosion limit	:	Not available.
Autoignition temperature	:	Not available.
Extinguishing media	:	If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	:	Carbon monoxide and carbon dioxide can form. Smoke, fumes. Nitrogen oxides can form.
Protective equipment for firefighters	:	Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions	:	Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Vapor concentrations in enclosed areas may ignite explosively. Empty containers may contain ignitable vapors.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Do not smoke, weld, generate sparks, or use flame near container. Do not use in confined or poorly ventilated areas. Personal protective equipment must be worn



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during maintenance or repair of contaminated mixer, reactor, or other equipment. Store under dry warehouse conditions away from heat and all ignition sources.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

- Respiratory protection : Wear NIOSH/MSHA approved vapor respirator with appropriate cartridge when the vapor concentration is expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Skin and body protection : Prevent contact with shoes and clothing. Use rubber apron and overshoes.
- Protective measures : Inspect and replace equipment at regular intervals. Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Color : Amber
- Odor : Amine
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Heavier than air
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : Not available.
- Water solubility : Negligible
- Specific Gravity : 1
- % Volatile Weight : 39.8 %

SECTION 10 - REACTIVITY / STABILITY

- Substances to avoid : Oxidizing agents. Epoxies. Isocyanates. Acids.



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Stability : Material is stable under normal storage, handling, and use.
Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Benzyl alcohol, CAS-No.: 100-51-6
Acute oral toxicity (LD-50 oral) 1,580 mg/kg (Mouse) 1,940 mg/kg (Rabbit) 3,100 mg/kg (Rat)
Acute inhalation toxicity (LC-50) 200 - 300 mg/l for 8 h (Rat) 1,000 mg/l for 8 h (Rat)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in compliance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:
CORROSIVE LIQUID, N.O.S. (Modified polyamine, Benzyl alcohol), 8, UN1760, PG II

SECTION 15 - REGULATORY INFORMATION

North American Inventories:
All components are listed or exempt from the TSCA inventory.
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:
SARA 313 Components : None present or none present in regulated quantities.

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :

OSHA Status: Considered : Irritant
hazardous based on the Corrosive
following criteria:

OSHA Flammability : Not Regulated

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
39 g/l



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U.S. State Regulations:

MASS RTK Components	:	Benzyl alcohol	100-51-6
		m-Xylenediamine	1477-55-0
Penn RTK Components	:	Benzyl alcohol	100-51-6
		Isophoronediamine	2855-13-2
		Amine-Epoxy Resin	NJ TSRN# 51721300-5468P
		4-Nonylphenol	84852-15-3
		m-Xylenediamine	1477-55-0
		Polyethylene glycol ether	9014-85-1
NJ RTK Components	:	Benzyl alcohol	100-51-6
		Isophoronediamine	2855-13-2
		Amine-Epoxy Resin	NJ TSRN# 51721300-5468P
		4-Nonylphenol	84852-15-3
		m-Xylenediamine	1477-55-0

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:
 100-41-4 Ethylbenzene

SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	1
Reactivity	1
PPE	

0 = Minimum
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 2 = Moderate
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Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

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| ACGIH - American Conference of Governmental Hygienists | PEL - Permissible Exposure Limit |
| CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act | RCRA - Resource Conservation and Recovery Act |
| DOT - Department of Transportation | RTK - Right To Know |
| DSL - Domestic Substance List | SARA - Superfund Amendments and Reauthorization Act |
| EPA - Environmental Protection Agency | STEL - Short Term Exposure Limit |
| HMIS - Hazardous Materials Information System | TLV - Threshold Limit Value |
| IARC - International Agency for Research on Cancer | TSCA - Toxic Substances Control Act |
| MSHA - Mine Safety Health Administration | TWA - Time Weighted Average |
| NDSL - Non-Domestic Substance List | V - Volume |
| NIOSH - National Institute for Occupational Safety and Health | VOC - Volatile Organic Compound |
| NTP - National Toxicology Program | WHMIS - Workplace Hazardous Materials Information System |



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OSHA - Occupational Safety and Health Administration