MATERIAL SAFETY DATA SHEET

PR-1829 B-1/2, Part A
FM4541A

Effective Date: 01/21/2000

SECTION I - MANUFACTURER AND PRODUCT INFORMATION

PRC-DeSoto International, Inc.
A PPG Industries Company
5430 San Fernando Road
P.O. Box 1800
Glendale, CA 91209

Information Phone: (818) 240-2060
Emergency Phone: (800) 228-5635
CHEMTREC: (800) 424-9300

Trade Name: PR-1829 B-1/2, Part A
Accelerator component
Product Code: FM4541A
Form ID No: A06
Product Class: Epoxy resin mixture

HMIS HAZARD RATING
HEALTH - 2
FLAMMABILITY - 1
REACTIVITY - 0
PPE - G
None(0)--->Extreme(4)

SECTION II - COMPOSITION

INGREDIENTS INFORMATION

CAS NUMBER	Wt %	CHEMICAL IDENTITY
025068-38-6	30 - 60	Bisphenol, A/Epichlorohydrin Based Epoxy Resin
028064-14-4	10 - 30	Polymer of Epichlorohydrin, Phenol-Formaldehyde Nov
000471-34-1	10 - 30	Calcium Carbonate
002530-83-8	< 5	Gamma-Glycidoxypropyltrimeth- oxysilane
001333-86-4	< 5	Carbon Black
067762-90-7	< 5	Amorphous Fumed Silica

EXPOSURE LIMITS

	EXPOSURE LIMITS (ppm)				
	ACGIH TLVs		OSHA PELs		
CAS NUMBER	TWA	STEL	TWA	STEL	
025068-38-6	N/E	N/E	N/E	N/E	
028064-14-4	N/E	N/E	N/E	N/E	
000471-34-1	10	N/E	15	N/E	S
002530-83-8	N/E	N/E	N/E	N/E	
001333-86-4	3.5 mg/m3	N/E	3.5 mg/m3	N/E	S
067762-90-7	10 mg/m3	N/E	N/E	N/E	S

Footnotes
(S) Occupational Exposure Standard
(R) Supplier's Recommended Limit

N/Av = Not Available
N.E. = Not Established
N/Ap = Not Applicable
NotknownXXX = CAS Number is not known.

Continued

SECTION III - HAZARDS IDENTIFICATION

Permissible Exposure Limits for Product:
Not established for product. See Section II.

ROUTE OF ENTRY AND EFFECTS OF OVEREXPOSURE

ROUTE OF ENTRY:
Inhalation and dermal.

INHALATION:
Vapor or fume will irritate the nose and throat.

EYE CONTACT:
Vapor or fume can irritate the eyes.

SKIN CONTACT:
Substance can cause moderate irritation.

INGESTION:
Ingestion can cause irritation of gastro-intestinal tract.

DELAYED EFFECTS:
Repeated overexposure may cause kidney/liver damage.

Contains an ingredient listed as known or suspected carcinogen?
NTP: No OSHA: No IARC: Yes

SECTION IV - FIRST AID MEASURES

INHALATION:
If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical facility and, if available, give supplemental oxygen.

EYE CONTACT:
For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.

SKIN CONTACT:
For skin contact, wipe excess material with dry towel. Then wash exposed areas with plenty of water, and soap if available, for several minutes. Get medical attention if irriation occurs.

INGESTION:
If swallowed dilute by giving two(2) glasses water to drink. Get immediate medical attention. Never give anything by mouth to an unconscious person.

GENERAL:
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Continued

SECTION V - FIRE AND EXPLOSION HAZARD IDENTIFICATION

FLASHPOINT: 210 F 98.88 C Method: PMCC
LEL (%): N/Av UEL (%): N/Av

FLAMMABILITY CLASSIFICATION:
Not flammable.

FIRE AND EXPLOSION HAZARDS:
Decomposition and combustion products may be hazardous. No unusual hazards known.

EXTINGUISHING MEDIA:
Carbon dioxide, dry chemical, foam, water fog.

FIRE FIGHTING PROCEDURES:
Use complete personal protection. Use water to cool heat exposed containers.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Cover with absorbent material if necessary. Scoop into containers. Clean up residue with a suitable cleaning solvent. Wear appropriate personal protective equipment (See Section VIII).

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Keep container tightly closed. Store in a dry location. Wear proper personal protective equipment (See Section VIII). Wash thoroughly after handling and before smoking or eating.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Good general mechanical ventilation.

RESPIRATORY PROTECTION:
Not normally required. When spraying or applying in any circumstances likely to produce airborne levels of solvent vapors in excess of the TLV, use an organic vapor cartridge or air-supplied respirator.

EYE PROTECTION:
Safety glasses.

Continued

IN PROTECTION:
Chemically resistant gloves.
NERAL:
Safety shower, eye wash station and washing facilities should be available. When using in circumstances where skin contact is likely, use complete protective garments.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black
Physical State:	Paste
Low Boiling Point:	500 F 259.97 C
High Boiling Point:	554 F 289.97 C
Evaporation Rate:	Non-volatile
Vapor Density:	Non-volatile
% Volatiles by Volume:	0
Specific Gravity:	1.37
Liquid Density:	Heavier than water
Weight Per Gallon:	11.41
VOC (GR/L):	N/Av
VOC (GR/L, Combined):	N/Av

SECTION X - STABILITY AND REACTIVITY

STABILITY:
Stable.
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATABILITY:
Strong oxidizing agents, amines, bases, alkalis.
CONDITIONS TO AVOID:
See incompatibilities above.
HAZARDOUS DECOMPOSITION PRODUCTS:
Products of combustion are hazardous including carbon monoxide and carbon dioxide.

Continued

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE ORAL, DERMAL AND INHALATION EFFECTS (LD50 AND LC50):

CAS NUMBER	LD50	LC50
025068-38-6	11400 mg/kg,oral,rat	N/AV.
028064-14-4	4000 mg/kg,oral,rat	N/AV.
000471-34-1	2000 mg/kg,oral,rat	N/AV.
002530-83-8	23000 mg/kg,oral,rat	N/AV.
001333-86-4	440 mg/kg,oral,rat	6750 mg/m3,rat,4hr.
067762-90-7	5000 mg/kg,oral,rat	4.9 mg/L,rat,4hr.

Carcinogenicity:

Carbon Black:

Based on an IARC conclusion that there is "sufficient evidence in experimental animals for the carcinogenicity of carbon black" and inadequate evidence of carcinogenicity in humans. IARC's overall evaluation is that "carbon black is possibly carcinogenic to humans" (Group 2B).

Carbon black has not been listed as a carcinogen by National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA). The National Institute of Occupational Safety & Health (NIOSH) criteria document on carbon black recommends that only carbon blacks with PAH levels greater than 0.1% be considered suspect carcinogens.

NOTICE:

There are no data available on the product itself.

SECTION XII - ECOLOGICAL INFORMATION

NOTICE:

There are no data available on the product itself.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

When disposing of this material, ensure that it is packaged, stored, transported, and otherwise handled in accordance with local, state, and federal regulations.

Continued

SECTION XIV - TRANSPORT INFORMATION

T (Non-Bulk):
PROPER SHIPPING NAME: Not regulated
'ECIAL NOTES:
None

SECTION XV - REGULATORY INFORMATION

SCA Section 8(b) - Inventory Status:
All ingredients in this product are listed in the TSCA Inventory or are exempt from listing.

ANADIAN EPA - DSL Inventory Status:
The DSL status of this product is unknown at this time.

ARA Title III Section 313 - Toxic Chemical List (TCL):
This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" inder Section 313 (40 CFR 372).

ARA Title III Section 302 - CERCLA:
This product contains no chemical regulated under Section 302 as extremely hazardous chemicals for emergency release notification (CERCLA List).

ALIFORNIA PROPOSITION 65 - Reportable ingredients:
Chemicals known by the state of CA to cause cancer:
This product does not contain any chemicals currently on the California list of known carcinogens.

Chemicals known by the state of CA to cause reproductive toxicity:
This product does not contain any chemicals currently on the California list of known Reproductive Toxins.

TSCA Section 12(b) - Export Notification:
This product does not contain any chemicals subject to Section 12(b) export notification.

Continued

CLEAN AIR ACT - Hazardous Air Polluents (CAA Section 112):
This product contains the following chemicals regulated under Section 112 for National Emmision Standards of Hazardous Air Pollutants notifiction.

000067-56-1 Methyl Alcohol

Pennsylvania Right to Know - Reportable Ingredients:
The following is required composition information. Also, review Section II for additional information for other chemicals.

001333-86-4 Carbon Black

New Jersey Right to Know - Reportable Ingredients:
The following is required composition information. Also, review Section II for additional information for other chemicals.

001333-86-4 Carbon Black

SECTION XVI - OTHER INFORMATION

Effective Date: 01/21/2000 Supersedes Date: 09/24/1996
Revision Number: 01

The information in this MSDS was obtained from sources which we believe to be reliable. However, since much of the information has been received from sources outside the company, it is provided without any warranty, expressed or implied, regarding its correctness, or suitability for specific situations. The conditions of handling, storage, use, and disposal of this product are beyond our control and may be beyond our knowledge. The user has the sole responsibility to determine the suitability of the material for any use, and the manner and conditions of use. Therefore, we cannot assume responsibility and expressly disclaim liability for loss, damage, injury, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials.

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MATERIAL SAFETY DATA SHEET

PR-1829 B-1/2, Part B
FM4487A

Effective Date: 01/21/2000

SECTION I - MANUFACTURER AND PRODUCT INFORMATION

PRC-DeSoto International, Inc.
A PPG Industries Company
5430 San Fernando Road
P.O. Box 1800
Glendale, CA 91209

Information Phone: (818) 240-2060
Emergency Phone: (800) 228-5635
CHEMTREC: (800) 424-9300

Trade Name: PR-1829 B-1/2, Part B
Base component
Product Code: FM4487A
Form ID No: A06
Product Class: Filled polythioether

HMIS HAZARD RATING
HEALTH - 1
FLAMMABILITY - 1
REACTIVITY - 0
PPE - G
None(0)--->Extreme(4)

SECTION II - COMPOSITION

INGREDIENTS INFORMATION

CAS NUMBER	Wt %	CHEMICAL IDENTITY
119147-78-3	30 - 60	Mercaptan Terminated Polythioether
000471-34-1	10 - 30	Calcium Carbonate
021645-51-2	1 - 10	Aluminum Hydroxide
067762-90-7	< 5	Amorphous Fumed Silica
013463-67-7	< 5	Titanium Dioxide @

EXPOSURE LIMITS

	EXPOSURE LIMITS (ppm)				
	ACGIH TLVs		OSHA PELs		
CAS NUMBER	TWA	STEL	TWA	STEL	
119147-78-3	N/E	N/E	N/E	N/E	
000471-34-1	10	N/E	15	N/E	S
021645-51-2	2 mg/m3	N/E	N/E	N/E	
067762-90-7	10 mg/m3	N/E	N/E	N/E	S
013463-67-7	10 mg/m3	N/E	10 mg/m3	N/E	S

Footnotes
(S) Occupational Exposure Standard
(R) Supplier's Recommended Limit

N/Av = Not Available
N.E. = Not Established
N/Ap = Not Applicable
NotknownXXX = CAS Number is not known.

Continued

SECTION III - HAZARDS IDENTIFICATION

:missible Exposure Limits for Product:
Not established for product. See Section II.

JTE OF ENTRY AND EFFECTS OF OVEREXPOSURE
ROUTE OF ENTRY:
Inhalation and dermal.
INHALATION:
Substance is not likely to be hazardous by inhalation.
EYE CONTACT:
Substance may cause irritation.
SKIN CONTACT:
Substance may cause minor irritation on repeated exposure.
INGESTION:
Substance is harmful if swallowed.
DELAYED EFFECTS:
Repeated overexpousre may cause headaches, dizziness, drowsiness, unconsciousness and central nervous system effects.
ɔntains an ingredient listed as known or suspected carcinogen?
NTP: No OSHA: No IARC: No

SECTION IV - FIRST AID MEASURES

NHALATION:
If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical facility and, if available, give supplemental oxygen.
YE CONTACT:
For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.
;KIN CONTACT:
For skin contact, wipe excess material with dry towel. Then wash exposed areas with plenty of water, and soap if available, for several minutes. Get medical attention if irriation occurs.
INGESTION:
If swallowed dilute by giving two(2) glasses water to drink. Get immediate medical attention. Never give anything by mouth to an unconscious person.
GENERAL:
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Continued

SECTION V - FIRE AND EXPLOSION HAZARD IDENTIFICATION

FLASHPOINT: 210 F 98.88 C Method: PMCC
LEL (%): N/Av UEL (%): N/Av

FLAMMABILITY CLASSIFICATION:
Not flammable.

FIRE AND EXPLOSION HAZARDS:
Decomposition and combustion products may be hazardous. No unusual hazards known.

EXTINGUISHING MEDIA:
Carbon dioxide, dry chemical, foam, water fog.

FIRE FIGHTING PROCEDURES:
Use complete personal protection. Use water to cool heat exposed containers.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Cover with absorbent material if necessary. Scoop into containers. Clean up residue with a suitable cleaning solvent. Wear appropriate personal protective equipment (See Section VIII).

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Keep container tightly closed. Store in a dry location. Wear proper personal protective equipment (See Section VIII). Wash thoroughly after handling and before smoking or eating.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Good general mechanical ventilation.

RESPIRATORY PROTECTION:
Not normally required. When spraying or applying in any circumstances likely to produce airborne levels of solvent vapors in excess of the TLV, use an organic vapor cartridge or air-supplied respirator.

Continued

E PROTECTION:
Safety glasses.
IN PROTECTION:
Chemically resistant gloves.
NERAL:
Safety shower, eye wash station and washing facilities should be available. When using in circumstances where skin contact is likely, use complete protective garments.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White
Physical State:	Thixotropic paste
Low Boiling Point:	N/Av
High Boiling Point:	N/Av
Evaporation Rate:	Non-volatile
Vapor Density:	Non-volatile
% Volatiles by Volume:	0
Specific Gravity:	1.43
Liquid Density:	Heavier than water
Weight Per Gallon:	11.91
VOC (GR/L):	N/Av
VOC (GR/L, Combined):	18

SECTION X - STABILITY AND REACTIVITY

STABILITY:
Stable.
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATABILITY:
Strong oxidizing agents.
CONDITIONS TO AVOID:
See incompatibilities above.
HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of carbon and nitrogen, sulfur dioxide, traces of hydrogen sulfide.

Continued

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE ORAL, DERMAL AND INHALATION EFFECTS (LD50 AND LC50):

CAS NUMBER	LD50	LC50
119147-78-3	5000 m,g/kg,oral,rat	N/AV.
000471-34-1	2000 mg/kg,oral,rat	N/AV.
021645-51-2	N/AV.	N/AV.
067762-90-7	5000 mg/kg,oral,rat	4.9 mg/L,rat,4hr.
013463-67-7	7500 mg/kg,oral,rat	N/AV.

NOTICE:
There are no data available on the product itself.

SECTION XII - ECOLOGICAL INFORMATION

NOTICE:
There are no data available on the product itself.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
When disposing of this material, ensure that it is packaged, stored, transported, and otherwise handled in accordance with local, state, and federal regulations.

SECTION XIV - TRANSPORT INFORMATION

DOT (Non-Bulk):
PROPER SHIPPING NAME: Not regulated
SPECIAL NOTES:
None

Continued

SECTION XV - REGULATORY INFORMATION

CA Section 8(b) - Inventory Status:
All ingredients in this product are listed in the TSCA Inventory or are exempt from listing.

NADIAN EPA - DSL Inventory Status:
The DSL status of this product is unknown at this time.

RA Title III Section 313 - Toxic Chemical List (TCL):
This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" inder Section 313 (40 CFR 372).

RA Title III Section 302 - CERCLA:
This product contains no chemical regulated under Section 302 as extremely hazardous chemicals for emergency release notification (CERCLA List).

ALIFORNIA PROPOSITION 65 - Reportable ingredients:
Chemicals known by the state of CA to cause cancer:
This product contains the following chemical which is known to the state of California to cause cancer.

000050-00-0 Formaldehyde

Chemicals known by the state of CA to cause reproductive toxicity:
This product does not contain any chemicals currently on the California list of known Reproductive Toxins.

SCA Section 12(b) - Export Notification:
This product contains following chemical that required annual or one time export notification per chemical and per country.

000067-63-0 Isopropanol
000108-95-2 Phenol

LEAN AIR ACT - Hazardous Air Polluents (CAA Section 112):
This product contains the following chemicals regulated under Section 112 for National Emmision Standards of Hazardous Air Pollutants notifiction.

000050-00-0 Formaldehyde
000067-56-1 Methyl Alcohol

Continued

000108-95-2 Phenol

Pennsylvania Right to Know - Reportable Ingredients:
The following is required composition information. Also, review Section II for additional information for other chemicals.

000067-56-1	Methyl Alcohol
000067-63-0	Isopropanol
013463-67-7	Titanium Dioxide @

New Jersey Right to Know - Reportable Ingredients:
The following is required composition information. Also, review Section II for additional information for other chemicals.

013463-67-7 Titanium Dioxide @

SECTION XVI - OTHER INFORMATION

Effective Date: 01/21/2000 Supersedes Date: 09/03/1998
Revision Number: 01

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