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# SAFETY DATA SHEET

### V1785B MRF HS-23 GRAY

Section 1. Identification			
GHS product identifier	:	V1785B MRF HS-23 GRAY	
Chemical name	:	Mixture	
CAS number	:	Mixture	
Other means of identification	:	FO20023174	
Product type	:	solid	
	ance	or mixture and uses advised against	
Product use	:	Industrial applications. Plastics.	
Supplier's details		POLYONE CORPORATION	
		33587 Walker Road, Avon Lake, OH 44012	
		1 (440) 930-1000 or 1 (866) POLYONE	
Emergency telephone number (with hours of operation)	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).	

## Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	COMBUSTIBLE DUSTS
<b>GHS label elements</b>		
Signal word Hazard statements	:	Warning May form combustible dust concentrations in air.

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### **Precautionary statements**

General	:	Not applicable.
Prevention	:	Not applicable.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Supplemental label elements	:	Keep container tightly closed.
Hazards not otherwise classified	:	Fine dust clouds may form explosive mixtures with air. Handling
		and/or processing of this material may generate a dust which can
		cause mechanical irritation of the eyes, skin, nose and throat.

# Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	FO20023174

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	1 - 5	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

### Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

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Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

Potential acute health effects	
Eye contact	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact	: Adverse symptoms may include the following: irritation redness
Inhalation	<ul> <li>Adverse symptoms may include the following: respiratory tract irritation coughing</li> </ul>
Skin contact	: No specific data.
Ingestion	: No specific data.



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### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Specific treatments	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	:	Use dry chemical powder. Do not use water jet.
Specific hazards arising from the chemical	:	Fine dust clouds may form explosive mixtures with air.
Hazardous thermal decomposition products	:	May emit Hydrogen Chloride (HCl). Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Special protective actions for fire- fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire- exposed containers cool.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self- contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and

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For emergency responders	:	unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".		
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).		
Methods and materials for containment and cleaning up				
Small spill	:	Move containers from spill area. Use spark-proof tools and explosion- proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.		
Large spill	:	Move containers from spill area. Use spark-proof tools and explosion- proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.		

### Section 7. Handling and storage

:

#### Precautions for safe handling

**Protective measures** 

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding

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Advice on general occupational hygiene	<ul> <li>and bonding containers and equipment before transferring material.</li> <li>Empty containers retain product residue and can be hazardous. Do not reuse container.</li> <li>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</li> </ul>
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to

avoid environmental contamination.

# Section 8. Exposure controls/personal protection

### **Control parameters**

### **Occupational exposure limits**

Ingredient name	Exposure limits
Titanium dioxide	OSHA PEL 1989 (1989-03-01)
	PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust
	OSHA PEL (1993-06-30)
	PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust
	ACGIH TLV (1996-05-18)
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:
	Permissible Exposure Level 10 mg/m3
Appropriate engineering controls :	fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls :	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of
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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **Individual protection measures**

Hygiene measures Eye/face protection	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Skin protection		
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

# Section 9. Physical and chemical properties

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### **Appearance**

Color:GREYOdor:Not available.Odor threshold:Not available.pH:Not available.Melting point:Not available.Boiling point:Not available.Boiling point:Not available.Flash point:Not available.Burning time:Not available.Burning rate:Not available.Evaporation rate:Not available.Flammability (solid, gas):Not available.Lower and upper explosive:Lower: Not available.(flammable) limitsUpper: Not available.Vapor pressure:Not available.Vapor density:Not available.Solubility:Not available.Solubility in water:Not available.Partition coefficient: n- octanol/water:Not available.Auto-ignition temperature:Not available.SADT:Not available.Viscosity:Dynamic: Not available.	Physical state	:	solid [Powder.]
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Kinematic: Not available.	(flammable) limits Vapor pressure Vapor density Relative density Solubility Solubility in water Partition coefficient: n- octanol/water Auto-ignition temperature Decomposition temperature SADT		Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.

# Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

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Incompatible materials	:	Avoid contact with acetal homopolymers and acetyl homopolymers during processing. Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

### Information on toxicological effects

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide				
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Conclusion/Summary	: Mixtu	re.Not fully tested.		
Irritation/Corrosion				
<b>Conclusion/Summary</b>				
Skin		re.Not fully tested.		
Eyes		re.Not fully tested.		
Respiratory	: Mixtu	re.Not fully tested.		
Sensitization				
<b>Conclusion/Summary</b>				
Skin		re.Not fully tested.		
Respiratory	: Mixtu	re.Not fully tested.		
<b>Mutagenicity</b>				
Conclusion/Summary	: Mixtu	re.Not fully tested.		
Carcinogenicity				
Conclusion/Summary <u>Classification</u>	: Mixtu	are.Not fully tested.		
Product/ingredient	OSHA LA	ARC NTH	)	



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name				
Titanium dioxide		2B		
Reproductive toxicity				
Conclusion/Summary	:	Mixture.Not fully tested.		
<b>Teratogenicity</b>				
Conclusion/Summary	:	Mixture.Not fully tested.		
Specific target organ toxicity Not available.	(single expo	osure)		
Specific target organ toxicity Not available.	(repeated ex	xposure)		
Aspiration hazard Not available.				
Information on the likely route exposure	es of :	Not available.		
Potential acute health effects				
Eye contact		Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.		
Inhalation	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.		
Skin contact	:	No known significant effects or critical hazards.		
Ingestion	:	No known significant effects or critical hazards.		
Symptoms related to the physical, chemical and toxicological characteristics				
Eye contact		Adverse symptoms may include the following: irritation		
Inhalation	:	redness Adverse symptoms may include the following: respiratory tract irritation coughing		
Skin contact Ingestion	:	No specific data. No specific data.		

### Delayed and immediate effects and also chronic effects from short and long term exposure

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Short term exposure

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:	Not available. Not available.
:	Not available. Not available.
:	Mixture.Not fully tested.
:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
:	No known significant effects or critical hazards.
:	No known significant effects or critical hazards.
:	No known significant effects or critical hazards.
:	No known significant effects or critical hazards.
:	No known significant effects or critical hazards.

### Numerical measures of toxicity

Acute toxicity estimates

Not available.

# Section 12. Ecological information

### **Toxicity**

Result	Species	Exposure
Acute LC50 > 1,000,000 μg/l	Fish - Mummichog	96 h
Marine water		
Acute LC50 > 1,000 mg/l Fresh	Fish - Fathead minnow	96 h
water		
Acute LC50 13 mg/l Fresh water	Aquatic invertebrates.	48 h
	Water flea	
Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates.	48 h
	Water flea	
	Acute LC50 > 1,000,000 µg/l Marine water Acute LC50 > 1,000 mg/l Fresh water Acute LC50 13 mg/l Fresh water	Acute LC50 > 1,000,000 μg/l       Fish - Mummichog         Marine water       Fish - Fathead minnow         Acute LC50 > 1,000 mg/l Fresh water       Fish - Fathead minnow         Acute LC50 13 mg/l Fresh water       Aquatic invertebrates. Water flea         Acute EC50 19.3 mg/l Fresh water       Aquatic invertebrates.



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	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 35.306 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
Conclusion/Summary	: Not available.		

### Persistence and degradability

Conclusion/Summary

: Not available.

#### **Bioaccumulative potential**

potential			
Product/ingredient name	LogPow	BCF	Potential
Titanium dioxide		352.00	low

### Mobility in soil

Soil/water partition coefficient	:	Not available.
(KOC)		
Other adverse effects	:	No known significant effects or critical hazards.

# Section 13. Disposal considerations

Disposal methods	:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed



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# Section 14. Transport information

U.S. DOT Classification	:	Not regulated for transportation.
ICAO/IATA	:	Consult mode specific transport rules
IMO/IMDG (maritime)	:	Consult mode specific transport rules

# Section 15. Regulatory information

U.S. Federal regulations	<ul> <li>United States - TSCA 12(b) - Chemical export notification: None of the components are listed.</li> <li>United States - TSCA 4(a) - Final Test Rules: Listed 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich</li> </ul>
	United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules:
	Not listed United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed Octocrilene
	United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Miscellaneous Zinc Compounds Zinc bis dibutyldithiocarbamate Vinyl chloride monomer
	United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed

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United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Not listed United States - Department of commerce - Precursor chemical: Not listed

Clean Air Act Section 112(b)	:	Not listed
Hazardous Air Pollutants (HAPs) Clean Air Act Section 602 Class I	:	Not listed
Substances Clean Air Act Section 602 Class II	:	Not listed
Substances DEA List I Chemicals (Precursor	:	Not listed
Chemicals) DEA List II Chemicals (Essential		Not listed
Chemicals)	•	i tot listou

### US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

### SARA 311/312

Classification

Fire hazard

:

### **Composition/information on ingredients**

Name	%	Classification
Titanium dioxide	1 - 5	СН

### SARA 313

Not applicable.

State regulations		
Massachusetts	:	The following components are listed:
		Titanium dioxide
New York	:	None of the components are listed.
New Jersey	:	The following components are listed:
		Ethene, chloro-, homopolymer
		Titanium dioxide
Pennsylvania	:	The following components are listed: Titanium dioxide

### California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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United States inventory (TSCA 8b)	:	All components are listed or exempted.
Canada inventory	:	Not determined.
International regulations		
International lists	:	<ul> <li>Australia inventory (AICS): Not determined.</li> <li>Taiwan inventory (CSNN): Not determined.</li> <li>Malaysia Inventory (EHS Register): Not determined.</li> <li>EINECS: Not determined.</li> <li>Japan inventory: Not determined.</li> <li>China inventory (IECSC): Not determined.</li> <li>Korea inventory: Not determined.</li> <li>New Zealand Inventory of Chemicals (NZIoC): Not determined.</li> <li>Philippines inventory (PICCS): Not determined.</li> </ul>
Chemical Weapons Convention List Schedule I Chemicals Chemical Weapons Convention List Schedule II Chemicals Chemical Weapons Convention List Schedule III Chemicals	::	Not listed Not listed

# Section 16. Other information

History		
Date of printing	:	11/23/2015
Date of issue/Date of revision	:	08/28/2015
Date of previous issue	:	10/29/2009
Version	:	1.1
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine
References	:	pollution) UN = United Nations Not available.

Notice to reader

POLYONE CORPORATION



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