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Version Number 1.4 Revision Date 02/05/2015 Page 1 of 15 Print Date 02/20/2015

SAFETY DATA SHEET

XDW5191E EXP. RMP-52 YELLOW C

Section 1. Identification			
GHS product identifier	:	XDW5191E EXP. RMP-52 YELLOW C	
Chemical name	:	Mixture	
CAS number	:	Mixture	
Other means of identification	:	FO20005433	
Product type	:	liquid	
		1	
Relevant identified uses of the subst	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	:	CARCINOGENICITY - Category 2
Supplemental label elements Hazards not otherwise classified	:	None known. None known.



Version Number 1.4 Revision Date 02/05/2015 Page 2 of 15 Print Date 02/20/2015

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	FO20005433

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	0.1 - 1	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

Inhalation	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.
	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 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. Continue to rinse for at least 10 minutes. Get medical attention. 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

ne

Version Number 1.4 Revision Date 02/05/2015 Page 3 of 15 Print Date 02/20/2015

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. 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 Inhalation Skin contact Ingestion Over-exposure signs/symptoms	::	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.
Over-exposure signs/symptoms		
Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.
Indication of immediate medical att	<u>entio</u>	n and special treatment needed, if necessary
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	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	:	In case of fire, use water spray (fog), foam, dry chemical or $\rm CO_2$. None known.
Specific hazards arising from the	:	In a fire or if heated, a pressure increase will occur and the container
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Version Number 1.4 Revision Date 02/05/2015 Page 4 of 15 Print Date 02/20/2015

chemical Hazardous thermal decomposition products	:	may burst. May emit Hydrogen Chloride (HCl). Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds
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.
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 For emergency responders	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. 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 containme	ent a	nd cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non- combustible, absorbent material e.g. sand, earth, vermiculite or
		4/15

ne

Version Number 1.4 Revision Date 02/05/2015 Page 5 of 15 Print Date 02/20/2015

diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	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.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. 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. Store in a well-ventilated place. 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



Version Number 1.4 Revision Date 02/05/2015

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 Environmental exposure controls	:	If user operations generate dust, 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. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of 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.
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

PolyOne.

Version Number 1.4	Page 7 of 15
Revision Date 02/05/2015	Print Date 02/20/2015

Other skin protection	:	on the task being performed and the risks involved and should be approved by a specialist before handling this product. 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, air-purifying or air-fed 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

Appearance

Physical state	:	liquid [liquid]
Color	:	YELLOW
Odor	:	Not available.
Odor threshold	:	Not available.
рН	:	Not available.
Melting 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) limits		Upper: Not available.
(flammable) limits Vapor pressure	:	Upper: Not available. Not available.
· /	:	
Vapor pressure	:	Not available.
Vapor pressure Vapor density	:	Not available. Not available.
Vapor pressure Vapor density Relative density	: : : : : : : : : : : : : : : : : : : :	Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility	: : : : : : : : : : : : : : : : : : : :	Not available. Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility Solubility in water	: : : : : : : : : : : : : : : : : : : :	Not available. Not available. Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility Solubility in water Partition coefficient: n-	:	Not available. Not available. Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility Solubility in water Partition coefficient: n- octanol/water	:	Not available. Not available. Not available. Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility Solubility in water Partition coefficient: n- octanol/water Auto-ignition temperature	:	Not available. Not available. Not available. Not available. Not available. Not available.
Vapor pressure Vapor density Relative density Solubility Solubility in water Partition coefficient: n- octanol/water Auto-ignition temperature Decomposition temperature		Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
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



Version Number 1.4 Revision Date 02/05/2015

Page 8 of 15 Print Date 02/20/2015

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	:	Keep away from extreme heat and oxidizing agents.
Incompatible materials	:	Avoid contact with acetal homopolymers and acetyl homopolymers during processing.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F). Do not use this pigment in polymers at temperatures over 200°C (392°F). Decomposition of diarylide pigments in polymers at temperatures over 200°C (392°F) may produce trace amounts of monoazo dyes, which in turn can decompose to produce aromatic amines. The amount and type of degradation products formed depend on the dwell time, formulation and processing conditions as well as temperature. As conditions become more severe, as when temperatures move into the 240-300°C (464-572°F) range, trace quantities of 3,3'-dichlorobenzidine can be generated. 3,3'-dichlorobenzidine is classified as a suspect carcinogen by NTP and IARC, is classified as Acute Toxicity category 4 and Carcinogen Category 1B according to 1272/2008EC (CLP), and is regulated by OSHA as a suspect carcinogen. In order to avoid the generation of and exposure to 3,3'-dichlorobenzidine, do not use diarylide pigments in polymers when temperatures exceed 200°C (392°F). Handle with care. Organic dusts have the potential to be explosive with static spark or flame initiation.

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
		8/15		



Version Number 1.4 Revision Date 02/05/2015

Page 9 of 15 Print Date 02/20/2015

	LD50 Deri	nal Rabl	oit	> 5,000 mg/kg	-
Conclusion/Summary	:	Mixture.No	t fully tested.		
Irritation/Corrosion					
Conclusion/Summary Skin Eyes Respiratory	:	Mixture.No	t fully tested. t fully tested. t fully tested.		
Sensitization					
Conclusion/Summary Skin Respiratory	:		t fully tested. t fully tested.		
<u>Mutagenicity</u> Conclusion/Summary	:	Mixture No	t fully tested.		
-	•	Winkture. 10	runy tested.		
Carcinogenicity					
Conclusion/Summary <u>Classification</u>	:	Mixture.No	t fully tested.		
Product/ingredient name	OSHA		IARC	NTP	
Titanium dioxide			2B		
<u>Reproductive toxicity</u> Conclusion/Summary	:	Mixture.No	t fully tested.		
Teratogenicity					
Conclusion/Summary	:	Mixture.No	t fully tested.		
Specific target organ toxicity Not available.	y (single exp	<u>osure)</u>			
Specific target organ toxicity Not available.	y (repeated e	exposure)			
<u>Aspiration hazard</u> Not available.					
Information on the likely rou	ites of 🛛 :	Not availabl	e.		



Version Number 1.4 Revision Date 02/05/2015 Page 10 of 15 Print Date 02/20/2015

exposure

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Symptoms related to the physica	chemical and toxicological characteristics
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.
Delayed and immediate effects a	d also chronic effects from short and long term exposure
Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Long term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health effects	
Conclusion/Summary	: Mixture.Not fully tested.
General	: No known significant effects or critical hazards.
Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration as level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
T 1 (1 66 (: No known significant effects or critical hazards.
Developmental effects Fertility effects	: No known significant effects or critical hazards.

Acute toxicity estimates

Not available.

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Version Number 1.4 Revision Date 02/05/2015

Page 11 of 15 Print Date 02/20/2015

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide			
	Acute LC50 1,000,000 µg/l Marine water	Fish - Mummichog	96 h
	Acute LC50 1,000 mg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 5.5 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute LC50 10 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute LC50 13 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 35.9 mg/l Fresh water	Aquatic plants - Green algae	72 h
	Acute EC50 5.83 mg/l Fresh water	Aquatic plants - Green algae	72 h
Conclusion/Summary	: Not available.		·

Persistence and degradability

Conclusion/Summary

Not available.

:

Bioaccumulative 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.

11/15

Version Number 1.4 Revision Date 02/05/2015

Page 12 of 15 Print Date 02/20/2015

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

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	:	United States - TSCA 12(b) - Chemical export notification: None of the components are listed. United States - TSCA 4(a) - Final Test Rules: Listed 1,2- Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich
		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

ne

Version Number 1.4 Revision Date 02/05/2015

		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 Poly(dimethylsiloxane)
		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 Diisooctyl phthalate Miscellaneous Zinc Compounds
		United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed 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) Hazardous Air Pollutants (HAPs)	:	Not listed
Clean Air Act Section 602 Class I Substances	:	Not listed
Clean Air Act Section 602 Class II	:	Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

:

not applicable

SARA 311/312

Classification

Delayed (chronic) health hazard

13/15



Version Number 1.4 Revision Date 02/05/2015 Page 14 of 15 Print Date 02/20/2015

Composition/information on ingredients

Name	%	Classification			
Titanium dioxide	0.1 - 1	СН			
SARA 313 Not applicable. State regulations		<u> </u>			
Massachusetts	: None of the components are listed.				
New York	None of the components are listed.				
New Jersey	: The following components are lis Ethene, chloro-, homopolymer Titanium dioxide	The following components are listed: Ethene, chloro-, homopolymer Titanium dioxide			
Pennsylvania	: The following components are list Diisooctyl phthalate	sted:			
	Titanium dioxide				
California Prop. 65 WARNING: This product contains a chemical known to the State of California to cause cancer.					
United States inventory (TSCA 8b)	: All components are listed or exer	All components are listed or exempted.			
Canada inventory	: Not determined.				
International regulations					
International lists	Taiwan inventory (CSNN): No Malaysia Inventory (EHS Regi EINECS: All components are lis Japan inventory: Not determin China inventory (IECSC): No Korea inventory: Not determin New Zealand Inventory of Che	 Australia inventory (AICS): Not determined. Taiwan inventory (CSNN): Not determined. Malaysia Inventory (EHS Register): Not determined. EINECS: All components are listed or exempted. Japan inventory: Not determined. China inventory (IECSC): Not determined. Korea inventory: Not determined. New Zealand Inventory of Chemicals (NZIoC): Not determined. Philippines inventory (PICCS): Not determined. 			
Chemical Weapons Convention List Schedule I Chemicals	: Not listed				
Chemical Weapons Convention List Schedule II Chemicals	: Not listed				
Chemical Weapons Convention	: Not listed				

Version Number 1.4 Revision Date 02/05/2015

Page 15 of 15 Print Date 02/20/2015

List Schedule III Chemicals

Section 16. Other information

History **Date of printing** 02/20/2015 : Date of issue/Date of revision 02/05/2015 : Date of previous issue 12/28/2012 : Version 1.4 : 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 = Intermediate 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 pollution) UN = United Nations Not available. References

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.