

Safety Data Sheet DRI-TEK

Product and company identification 1. **Product name** : DRI-TEK **Synonym** : bucs: butoksyetylowy alkohol (polish): 2-butossi-etanolo (italian): 2-butoxy-aethanol (german); butoxyethanol; n-butoxyethanol; 2-butoxyethanol; 2-butoxy-1-ethanol; butyl cellosolve; o-butyl ethylene glycol; butyl glycol; butylglycol (french,german); butyl oxitol; dowanol eb; ethylene glycol n-butyl ether; ethylene glycol, monobutyl ether; gafcol eb; glycol butyl ether; glycol monobutyl ether; monobutyl ether of ethylene glycol; monobutyl glycol ether; 3-oxa-1-heptanol; poly-solv eb; ethanol,2-butoxy-; ethylene glycol monobutyl ether; butoksyetylowy alcohol (polish) : BUTOXYETHANOL **INCI Name CAS** number : 111-76-2 : Other non-specified industry: SOLVENT FOR NITROCELLULOSE RESINS; SPRAY **Material uses** LACQUERS; QUICK-DRYING LACQUERS; VARNISHES; ENAMELS; DRYCLEANING COMPOUNDS; VARNISH REMOVERS; TEXTILE (PREVENTING SPOTTING IN PRINTING OR DYEING); MUTUAL SOLVENT FOR "SOLUBLE" MINERAL OILS TO HOLD SOAP IN SOLUTION AND TO IMPROVE THE EMULSIFYING PROPERTIES. : IFS0015 Internal code System code : IFS0015 : Innospec Fuel Specialties LLC Supplier 8310 South Valley Highway Suite 350 Englewood CO, 80112 USA : 1-800-441-9547 Information contact e-mail address of person sdsinfo@innospecinc.com responsible for this SDS **NON-emergency enquiries** : corporatecommunications@innospecinc.com

Emergency telephone number

In USA, Canada and North America, 24 hour / 7 day emergency information for our product is provided by the CHEMTREC® Emergency Call Center based in the USA

Country information

USA, Canada, Puerto Rico, Virgin Islands : In case of difficulties, or for ships at sea : In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for our products is provided by the NCEC CARECHEM 24 global network

Country information

South America (all countries)

Brazil

Mexico

- : Emergency telephone number
- : +1 800 424 9300
- : +1 703 527 3887



Philadelphia USA

Brazil

- : Emergency telephone Location number
- +1 215 207 0061
 - +55 113 711 9144
 - +52 555 004 8763 Mexico

1. Product and company identification

Europe (all countries) Middle East, Africa (French, Portuguese, English)	+44 (0) 1235 239 670	London, UK
Middle East, Africa (Arabic, French, English)	+44 (0) 1235 239 671	Lebanon
Asia Pacific (all countries except China)	+65 3158 1074	Singapore

+86 10 5100 3039

Beijing China

China

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standar (29 CFR 1910.1200).	rd
Classification of the substance or mixture	: ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2	
GHS label elements		
Hazard pictograms		
Signal word	: Warning	
Hazard statements	 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled. H319 - Causes serious eye irritation. H315 - Causes skin irritation. 	
Precautionary statements		
Prevention	 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. 	g.
Response	 P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P352 + P312 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. 	ou
Storage	Not applicable.	
Disposal	 P501 - Dispose of contents and container in accordance with all local, regional, natio and international regulations. 	nal
Hazards not otherwise classified	: None known.	
Target organs	: Causes damage to the following organs: blood, kidneys, liver, lymphatic system, upp respiratory tract, skin, central nervous system (CNS), eye, lens or cornea. May cause damage to the following organs: eyes.	er

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Substance/mixture	: Substance
Chemical name	: 2-butoxyethanol
Other means of identification	: bucs; butoksyetylowy alkohol (polish); 2-butossi-etanolo (italian); 2-butoxy-aethanol (german); butoxyethanol; n-butoxyethanol; 2-butoxyethanol; 2-butoxy-1-ethanol; butyl cellosolve; o-butyl ethylene glycol; butyl glycol; butylglycol (french,german); butyl oxitol; dowanol eb; ethylene glycol n-butyl ether; ethylene glycol, monobutyl ether; gafcol eb; glycol butyl ether; glycol monobutyl ether; monobutyl ether of ethylene glycol; monobutyl glycol ether; 3-oxa-1-heptanol; poly-solv eb; ethanol,2-butoxy-; ethylene glycol monobutyl ether; butoksyetylowy alcohol (polish)

Ingredient name	%	CAS number
2-butoxyethanol; butyl cellosolve	60 - 100	111-76-2

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.
Inhalation :	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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 :	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. 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 necessary, call a poison center or physician. 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/effec	ts, acute and delayed
Potential acute health effects	

Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled.
Date of issue/Date of rev	ision : 2015-05-29

Section 4. First aid measures

Skin contact	: Harmful in contact with skin. Causes skin irritation.
Ingestion	: Harmful if swallowed. Irritating to mouth, throat and stomach.
Over-exposure signs/sym	<u>ptoms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.
Indication of immediate me	dical attention 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
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See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
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.
Flash point	: Closed cup: 65.556°C (150°F) [Pensky-Martens.] Open cup: 61.85°C (143.3°F)

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 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.		

Section 6. Accidental release measures

For emergency responders	:	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 co	ont	ainment and 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 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	1	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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. 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 a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). 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
2-butoxyethanol; butyl cellosolve OSHA PEL 1989 (United States, 3/1989). Absorbed thro	
59	 TWA: 25 ppm, 0 times per shift, 8 hours. TWA: 120 mg/m³, 0 times per shift, 8 hours. NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 5 ppm, 0 times per shift, 10 hours. TWA: 24 mg/m³, 0 times per shift, 10 hours. ACGIH TLV (United States, 4/2014). TWA: 20 ppm, 0 times per shift, 8 hours. OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 50 ppm, 0 times per shift, 8 hours.
ate of issue/Date of revision : 2015	5-05-29 5/1.

Section 8. Exposure controls/personal protection

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		TWA: 240 mg/m ³ , 0 times per shift, 8 hours.			
2-butoxyethanol; butyl cel	losolve	OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.			
		 TWA: 25 ppm, 0 times per shift, 8 hours. TWA: 120 mg/m³, 0 times per shift, 8 hours. NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 5 ppm, 0 times per shift, 10 hours. TWA: 24 mg/m³, 0 times per shift, 10 hours. ACGIH TLV (United States, 4/2014). TWA: 20 ppm, 0 times per shift, 8 hours. OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 50 ppm, 0 times per shift, 8 hours. TWA: 240 mg/m³, 0 times per shift, 8 hours. 			
Appropriate engineering controls		uate ventilation. Use process enclosures, local exhaust ventilation or controls to keep worker exposure to airborne contaminants below any tatutory limits.			
Environmental exposure controls	they comply with th cases, fume scrubb	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 mea	<u>sures</u>				
Hygiene measures	eating, smoking an Appropriate technic Wash contaminate	rms and face thoroughly after handling chemical products, before d using the lavatory and at the end of the working period. ques should be used to remove potentially contaminated clothing. d clothing before reusing. Ensure that eyewash stations and safety to the workstation location.			
Eye/face protection	assessment indicat gases or dusts. If o	nplying with an approved standard should be used when a risk tes this is necessary to avoid exposure to liquid splashes, mists, contact is possible, the following protection should be worn, unless dicates a higher degree of protection: chemical splash goggles.			
Skin protection					
Hand protection	worn at all times when ecessary. Consid during use that the noted that the time glove manufacturer	, impervious gloves complying with an approved standard should be then handling chemical products if a risk assessment indicates this is ering the parameters specified by the glove manufacturer, check gloves are still retaining their protective properties. It should be to breakthrough for any glove material may be different for different rs. In the case of mixtures, consisting of several substances, the ne gloves cannot be accurately estimated.			
Body protection		equipment for the body should be selected based on the task being risks involved and should be approved by a specialist before ct.			
Other skin protection	based on the task b	ar and any additional skin protection measures should be selected being performed and the risks involved and should be approved by a andling this product.			
Respiratory protection	standard if a risk as based on known or	d, air-purifying or supplied-air respirator complying with an approved seessment indicates this is necessary. Respirator selection must be anticipated exposure levels, the hazards of the product and the safe e selected respirator.			

Section 9. Physical and chemical properties

Appearance	
Physical state	: Liquid. [COLORLESS LIQUID]
Color	: Colorless.
Odor	: MILD, ETHER-LIKE ODOR
Odor threshold	: Not available.
рН	: Not available.
Melting point	: -74.8°C (-102.6°F)
Boiling point	: 168.4 to 170.85°C (335.1 to 339.5°F)
Flash point	: Closed cup: 65.556°C (150°F) [Pensky-Martens.] Open cup: 61.85°C (143.3°F)
Evaporation rate	: 0.072 compared with butyl acetate
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Lower: 1.1% Upper: 10.6%
Vapor pressure	: 0.08 kPa (0.6 mm Hg) (at 20°C)
Vapor density	: 4.07 (Air = 1)
Density	: 0.903 g/cm ³ [20°C (68°F)]
Specific gravity	: 0.9
Density	: 7.514 lbs/gal
Solubility	: Easily soluble in the following materials: cold water, hot water.
Partition coefficient: n- octanol/water	: 0.83
Auto-ignition temperature	: 244°C (471.2°F)
Decomposition temperature	: Not available.
Viscosity	: Not available.

Section 10. Stability and reactivity

Reactivity Chemical stability Possibility of hazardous reactions	 No specific test data related to reactivity available for this product or its ingredients. The product is stable. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Dose
2-butoxyethanol	-			250 mg/kg 450 ppm
2-butoxyethanol	-		Vapor	450 ppm

Potential chronic health effects

Not available.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Test	Species	Result
2-butoxyethanol	-	Rabbit	Eyes - Moderate irritant -
	-	Rabbit	Eyes - Severe irritant -
	-	Rabbit	Skin - Mild irritant -
2-butoxyethanol	-	Rabbit	Eyes - Moderate irritant -
	-	Rabbit	Eyes - Severe irritant -
	-	Rabbit	Skin - Mild irritant -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP		
2-butoxyethanol; butyl cellosolve	-	3	-		

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-butoxyethanol; butyl cellosolve	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1490 mg/l Chronic NOEC 1000 mg/l Fresh water	Fish Daphnia - Daphnia magna	96 hours 48 hours
2-butoxyethanol; butyl cellosolve	Acute EC50 911 mg/l	Algae	72 hours
	Acute EC50 >1800 mg/l Acute LC50 1490 mg/l	Daphnia Fish	48 hours 96 hours
2.0	Chronic NOEC 1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours

Persistence and degradability Bioaccumulative potential DRI-TEK

Section 12. Ecological information

Product/ingredient name	LogPow	BCF	Potential
2-butoxyethanol; butyl cellosolve	0.83	-	low
2-butoxyethanol; butyl cellosolve	0.83	-	low

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any byproducts 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.

	DOT Classification	IMDG	IATA
UN number	NA1993	Not regulated.	Not regulated.
UN proper shipping name	Combustible liquid, n.o.s. (2-butoxyethanol)		-
Transport hazard class(es)	Combustible liquid.	5	-
Packing group			-
Environmental hazards	No.	No.	No.
Additional	Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: 60 L Cargo aircraft Quantity limitation: 220 L Special provisions IB3,T1, T4, TP1 This material is not regulated under 49CFR 173.150(f) in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine		

Section 14. Transport information

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pollutant, or specifically listed as a hazardous substance. The requirements of this subchapter, 49CFR 171.4(c), specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft.		

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	hazard	Sudden release of pressure		(acute) health	Delayed (chronic) health hazard
2-butoxyethanol; butyl cellosolve	60 - 100	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-butoxyethanol	111-76-2	60 - 100
Supplier notification	2-butoxyethanol	111-76-2	60 - 100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations **Massachusetts** The following components are listed: 2-BUTOXYETHANOL **New York** None of the components are listed. : The following components are listed: 2-BUTOXY ETHANOL; BUTYL CELLOSOLVE **New Jersey Pennsylvania** : The following components are listed: ETHANOL, 2-BUTOXY-California Prop. 65 - CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer, birth defects or other reproductive harm. International lists **National inventory** Date of issue/Date of revision 2015-05-29 10/12 5

Section 15. Regulatory information

Australia inventory (AICS)	: All components are listed or exempted.
Canada inventory	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Europe inventory	: All components are listed or exempted.
Japan inventory (ENCS)	: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan inventory (TCSI)	: All components are listed or exempted.
United States inventory (TSCA 8b)	: All components are listed or exempted.

Our REACH (pre-) registrations DO NOT cover the following:

1. The manufacture of these products by our company outside the EU unless covered by the Only Representative provisions, and

2. The importation of these products into Europe by other companies. Re-importation by other companies is not covered by our (pre-) registrations Customers and other third parties importing and/or re-importing our products into Europe will need either:

- Their own (pre-) registration for substances contained in the imported product, or constituent monomers (imported above 1 tonne per year and >2% by weight) in the case of imported polymers, or

- In the case of importation only, to make use of the "Only Representative" provisions, if available.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Classification according to Directive 67/548/EEC [DSD] or Classification according to Directive 1999/45/EC [DPD]

Risk phrases		 R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/38- Irritating to eyes and skin. S36/37- Wear suitable protective clothing and gloves. 	
Salety phrases		S46- If swallowed, seek medical advice immediately and show this container or label.	•
<u>History</u>			
Date of printing	:	2015-05-29	
Date of issue/Date of revision	:	2015-05-29	
Date of issue/Date of rev	ision	: 2015-05-29	

11/12

Section 16. Other information

Date of previous issue	: No previous validation
Version	: 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 pollution) UN = United Nations

✓ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named 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.