According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Shellzone

Print Date: 08/30/2018 Version Revision Date: SDS Number: 4.0 08/29/2018 800001004185 Date of last issue: 05/12/2017 **SECTION 1. IDENTIFICATION** Product name Shellzone : : 001B0209 Product code Manufacturer or supplier's details Manufacturer/Supplier : Shell Oil Products US PO Box 4427 Houston TX 77210-4427 USA SDS Request : (+1) 877-276-7285 Customer Service **Emergency telephone number** Spill Information : 877-504-9351 Health Information : 877-242-7400 Recommended use of the chemical and restrictions on use Recommended use : Antifreeze and coolant. **SECTION 2. HAZARDS IDENTIFICATION** GHS classification in accordance with 29 CFR 1910.1200 Acute toxicity (Oral) : Category 4

Specific target organ toxicity : Category 2 (Kidney) - repeated exposure **GHS** label elements Hazard pictograms Signal word Warning : Hazard statements PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: H302 Harmful if swallowed. H373 May cause damage to organs through prolonged or repeated exposure if swallowed. **ENVIRONMENTAL HAZARDS:** Not classified as an environmental hazard under GHS criteria.

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Precau	tionary statements	:		s thoroughly after handling. drink or smoke when using this product.	
			Response: P301 + P312 IF S if you feel unwell. P330 Rinse mouth	WALLOWED: Call a POISON CENTER/doctor	
			Storage: No precautionary	phrases.	
			Disposal:		
			P501 Dispose of contents/ container to an approved waste disposal plant.		
Contai	lous components which ns ethanediol. ns bittering agent.	า mu	ist be listed on the	label:	
Other	hazards which do not	res	ult in classificatio	n	
Intentio death	onal abuse, misuse or c	other	massive exposure	e may cause multiple organ damage and or	

The classification of this material is based on OSHA HCS 2012 criteria.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

: Mixture of ethylene glycol, water and additives.

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (% w/w)
disodium tetraborate pentahydrate	Borates, tetra sodium salts, pentahydrate	12179-04-3	0.1 - 0.25
Diethylene glycol	2,2'- oxydiethanol	111-46-6	1 - 5
Ethanediol	ethane-1,2-diol	107-21-1	90 - 100

SECTION 4. FIRST-AID MEASURES

General advice	:	DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.
If inhaled	:	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
In case of skin contact	:	Remove contaminated clothing. Flush exposed area with wa- ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue

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			rinsing. If persistent irritati	on occurs, obtain medical attention.
lf swa	llowed	:	medical facility for	not induce vomiting: transport to nearest r additional treatment. If vomiting occurs sep head below hips to prevent aspiration.
	important symptoms ffects, both acute and ed	:	increased or decr can include nause lumbar pain short death. High concentratio pression resulting	ay be recognized by blood in the urine or eased urine flow. Other signs and symptoms ea, vomiting, abdominal cramps, diarrhoea, ly after ingestion, and possibly narcosis and ns may cause central nervous system de- in headaches, dizziness and nausea; con- nay result in unconsciousness and/or death.
Prote	ction of first-aiders	:		ng first aid, ensure that you are wearing the nal protective equipment according to the d surroundings.
medio	tion of any immediate al attention and special nent needed	:	The preferred treatical facility and us administration of a gastric aspiration, able and a delay of such medical atter may be appropriative there are any sign sidered on a case Specific other treating	ATMENT IS EXTREMELY IMPORTANT! atment is immediate transportation to a med- e of appropriate treatment including possible activated charcoal, gastric lavage and or If none of the above are immediately avail- of more than one hour is anticipated before ntion can be obtained, induction of vomiting te using IPECAC syrup (Contraindicated if as of CNS depression). This should be con- by case basis following specialist advice. atments may include ethanol therapy, fomep- acidosis and haemodialysis. Seek specialist lay.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon diox- ide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during fire- fighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment.

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Special protective equipment for firefighters		:	: Proper protective equipment including chemical resi gloves are to be worn; chemical resistant suit is indi large contact with spilled product is expected. Self-O Breathing Apparatus must be worn when approachi a confined space. Select fire fighter's clothing appro relevant Standards (e.g. Europe: EN469).		
SECTION	6. ACCIDENTAL RELE	AS	E MEASURES		
tive e	onal precautions, protec- equipment and emer- y procedures	:	Avoid contact wit	h skin and eyes.	
Envir	onmental precautions	:	nation. Prevent fi	containment to avoid environmental contami- rom spreading or entering drains, ditches or and, earth, or other appropriate barriers.	
			Local authorities cannot be contain	should be advised if significant spillages ned.	
	ods and materials for ainment and cleaning up	:	means such as v safe disposal. Do as contaminated up with an appro	pills (> 1 drum), transfer by mechanical acuum truck to a salvage tank for recovery or o not flush away residues with water. Retain waste. Allow residues to evaporate or soak priate absorbent material and dispose of contaminated soil and dispose of safely	
			means to a labele safe disposal. All appropriate abso	pills (< 1 drum), transfer by mechanical ed, sealable container for product recovery or ow residues to evaporate or soak up with an rbent material and dispose of safely. Remove I and dispose of safely.	
Addit	ional advice	:	see Chapter 8 of	selection of personal protective equipment this Safety Data Sheet. disposal of spilled material see Chapter 13 of Sheet.	
			Local authorities cannot be contain	should be advised if significant spillages ned.	
			al to the environn	may require reporting releases of this materi- nent which exceed the reportable quantity 15) to the National Response Center at	

SECTION 7. HANDLING AND STORAGE

Technical measures

: Use local exhaust ventilation if there is risk of inhalation of

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		Use the sessme	, mists or aerosols. information in this data sheet as input to a risk as- nt of local circumstances to help determine appropri- rols for safe handling, storage and disposal of this
Advi	ce on safe handling	Avoid in When h worn an Properly	rolonged or repeated contact with skin. haling vapour and/or mists. andling product in drums, safety footwear should be d proper handling equipment should be used. / dispose of any contaminated rags or cleaning mate- order to prevent fires.
Avoi	dance of contact	: Strong of	oxidising agents.
	her information on stor- stability	place. Use pro	ontainer tightly closed and in a cool, well-ventilated perly labeled and closable containers. ambient temperature.
Pack	kaging material	steel or	e material: For containers or container linings, use mild high density polyethylene. ble material: Zinc., Avoid contact with galvanized ma-
Con	tainer Advice		ylene containers should not be exposed to high tem- es because of possible risk of distortion.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Ethanediol	107-21-1	TWA (Va- pour)	25 ppm	ACGIH
Ethanediol		STEL (Va- pour)	50 ppm	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

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National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures :	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	 General Information: Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Personal protective equipmen	t
Respiratory protection :	No respiratory protection is ordinarily required under normal conditions of use.

conditions of use.
In accordance with good industrial hygiene practices, precau-
tions should be taken to avoid breathing of material.
If engineering controls do not maintain airborne concentra-
tions to a level which is adequate to protect worker health,
select respiratory protection equipment suitable for the spe-

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		Check with res Where air-filter priate combina Select a filter s	of use and meeting relevant legislation. piratory protective equipment suppliers. ring respirators are suitable, select an appro- tion of mask and filter. suitable for the combination of organic gases Type A/Type P boiling point >65°C (149°F)].
	protection emarks	gloves approve US: F739) mad suitable chemi gloves Suitabil usage, e.g. fre sistance of glo glove suppliers Personal hygie Gloves must o gloves, hands cation of a nor For continuous through time o 480 minutes w short-term/spla recognize that may not be av- time maybe ac and replaceme a good predict dependent on Glove thicknes	ontact with the product may occur the use of ed to relevant standards (e.g. Europe: EN374, de from the following materials may provide cal protection. PVC, neoprene or nitrile rubber ity and durability of a glove is dependent on quency and duration of contact, chemical re- ve material, dexterity. Always seek advice from s. Contaminated gloves should be replaced. ene is a key element of effective hand care. nly be worn on clean hands. After using should be washed and dried thoroughly. Appli- operfumed moisturizer is recommended. s contact we recommend gloves with break- f more than 240 minutes with preference for > here suitable gloves can be identified. For ash protection we recommend the same, but suitable gloves offering this level of protection ailable and in this case a lower breakthrough ceptable so long as appropriate maintenance ent regimes are followed. Glove thickness is not or of glove resistance to a chemical as it is the exact composition of the glove material. as should be typically greater than 0.35 mm the glove make and model.
Eye p	protection		andled such that it could be splashed into eyes, wear is recommended.
Skin a	and body protection	work clothes.	n is not ordinarily required beyond standard tice to wear chemical resistant gloves.
Prote	ctive measures		ctive equipment (PPE) should meet recom- nal standards. Check with PPE suppliers.
Therr	nal hazards	: Not applicable	
Envir	ronmental exposure of	controls	
Gene	advice	: Take appropria	ate measures to fulfill the requirements of rele-

General advice	:	Take appropriate measures to fulfill the requirements of rele- vant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being dis- charged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before

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				ace water. on emission limits for volatile substances I for the discharge of exhaust air containing
SECTION 9	. PHYSICAL AND CHE	EMIC	CAL PROPERTIES	S
Appear	rance	:	Liquid at room te	mperature.
Colour		:	green	
Odour		:	characteristic	
Odour	Threshold	:	Data not availabl	e
рН		:	Not applicable	
Melting	point/freezing point	:	-37 °C / -34 °F (50.0 hPa) Method: ASTM D	01177
Initial b range	oiling point and boiling	:	> 100 °C / 212 °F estimated value(
Flash p	point	:	126 °C / 259 °F	
			Method: Unspeci	ified
Evapor	ration rate	:	Data not availabl	e
Flamm	ability (solid, gas)	:	Data not availabl	e
	explosion limit / upper ability limit	:	Typical 15 %(V)	
	explosion limit / Lower ability limit	:	Typical 3 %(V)	
Vapou	r pressure	:	Data not availabl	e
Relativ	e vapour density	:	Data not availabl	e
Relativ	e density	:	1,130 (15 °C / 59	9°F)
Density	/	:	1.130 kg/m3 (15. Method: Unspeci	
Solubil Wat	ity(ies) ter solubility	:	completely solub	le
Solu	ubility in other solvents	:	Data not availabl	e
Partitio octano	n coefficient: n- I/water	:	Data not availabl	e

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Auto-i	gnition temperature	: > 200 °C / 3	92 °F
Decor	nposition temperature	: Data not ava	ailable
Viscos Vis	sity scosity, dynamic	: Data not ava	ailable
Vis	scosity, kinematic	: 10 mm2/s (4	40.0 °C / 104.0 °F)
		Method: Un	specified
Condu	uctivity	: This materia	al is not expected to be a static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable.
Possibility of hazardous reac- tions	:	Reacts with strong oxidising agents.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Strong oxidising agents.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	:	Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise,
		the data presented is representative of the product as a
		whole, rather than for individual component(s).

Information on likely routes of exposure

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity		LD50 (rat): > 500 - 2,000 mg/kg Remarks: Harmful if swallowed.
		Remarks: There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 milliliters (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs. Ingestion may cause drowsiness and dizziness.

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Acute	inhalation toxicity	: LC 50 (Rat): > 5 Exposure time: 4 Remarks: Low to	h
Acute	dermal toxicity	: LD50 (Rabbit): > Remarks: Low to	

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

IARC	Group 2A: Probably carcinogenic to humans	
	Sodium nitrate	7631-99-4
OSHA	No component of this product present at levels greate equal to 0.1% is on OSHA's list of regulated carcinog	
NTP	No component of this product present at levels greate equal to 0.1% is identified as a known or anticipated by NTP.	

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Repr	oductive toxicity		
Prod	<u>uct:</u>		
			a developmental toxicant., Does not impair on available data, the classification criteria are
<u>Com</u>	ponents:		
disod	lium tetraborate per	itahydrate:	
		Remarks: Base are not met.	ed on available data, the classification criteria
STO	Γ - single exposure		
<u>Prod</u> Rema		ble data, the classificati	on criteria are not met.
STO	F - repeated exposur	e	
Prod	uct:		
Rema	arks: Kidney: can cau	se kidney damage.	
Aspii	ration toxicity		
Aspii <u>Prod</u>	•		
Prod	•		
Prod Not a	uct:		
Prod Not a	uct: n aspiration hazard. her information		
Prod Not a Furth Prod	uct: n aspiration hazard. her information uct:	to respiratory system.	
Prod Not a Furth Prod Rema	uct: n aspiration hazard. her information uct:		
Prode Not a Furth Prode Rema	uct: n aspiration hazard. her information uct: arks: Slightly irritating	NFORMATION : Ecotoxicologica for this product Information give and the ecotox Unless indicate	al data have not been determined specifically en is based on a knowledge of the components icology of similar products. ed otherwise, the data presented is representa- uct as a whole, rather than for individual com-
Produ Not a Furth Produ Rema	uct: n aspiration hazard. her information uct: arks: Slightly irritating 12. ECOLOGICAL II	NFORMATION : Ecotoxicologica for this product Information give and the ecotox Unless indicate tive of the prod	en is based on a knowledge of the components icology of similar products. Ind otherwise, the data presented is representa-
Produ Not a Furth Produ Rema	uct: n aspiration hazard. her information uct: arks: Slightly irritating 12. ECOLOGICAL II for assessment	NFORMATION : Ecotoxicologica for this product Information give and the ecotox Unless indicate tive of the prod	en is based on a knowledge of the components icology of similar products. Ind otherwise, the data presented is representa-

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ty)			Remarks: LC/EC/ Practically non to Based on availabl	
	bity to daphnia and other tic invertebrates (Acute ty)	:	Remarks: LC/EC/ Practically non to Based on availabl	
Toxic icity)	vity to algae (Acute tox-	:	Remarks: LC/EC/ Practically non to Based on availabl	
Toxic icity)	tity to fish (Chronic tox-	:	Remarks: Data no	ot available
Toxic	bity to daphnia and other tic invertebrates (Chron- icity)	:	Remarks: Data no	ot available
	sity to microorganisms te toxicity)	:	Remarks: Data no	ot available
Persi	istence and degradabili	ity		
Prod Biode	uct: egradability	:	Remarks: Readily	biodegradable.
Bioa	ccumulative potential			
<u>Prod</u> Bioac	uct: ccumulation	:	Remarks: Does n	ot bioaccumulate significantly.
Mobi	lity in soil			
<u>Prod</u> Mobil		:		
Othe	r adverse effects			
Prod Addit matic	ional ecological infor-	:		one depletion potential, photochemical Itential or global warming potential.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods Waste from residues	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the
		toxicity and physical properties of the material generated to determine the proper waste classification and disposal meth- ods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses
		Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.
Contaminated packaging	:	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

UN/ID/NA number	• •	UN 3082
Proper shipping na	ne :	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethylene glycol)
Class	:	9
Packing group	:	III
Labels	:	9
Reportable quantity		Ethylene glycol (5,000 lb)
Marine pollutant	:	no
Remarks	:	This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ	
		(lbs)	(lbs)	
Ethanediol	107-21-1	5000	5000	

*: Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA., The components with RQs are given for information.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Acute toxicity (any route of exposure) Specific target organ toxicity (single or rep		eated exposure)
SARA 313	:	: The following components are subject to reporting leve tablished by SARA Title III, Section 313:		eporting levels es-
		Ethanediol	107-21-1	>= 90 - <= 100 %

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Pennsylvania Right To Know		
Ethanediol	107-21-1	
Diethylene glycol	111-46-6	

California Prop. 65

WARNING: This product can expose you to chemicals including Ethanediol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

Ethanediol

107-21-1

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Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The components of this product are reported in the following inventories:			
EINECS	:	All components listed or polymer exempt.	
TSCA	:	All components listed.	
DSL	:	All components listed.	

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reac- 2, 1, 0 tivity)

Full text of other abbreviations

	ACGIH ACGIH / TWA ACGIH / STEL Abbreviations and Acronyms	:	USA. ACGIH Threshold Limit Values (TLV) 8-hour, time-weighted average Short-term exposure limit The standard abbreviations and acronyms used in this docu- ment can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.
			ACGIH = American Conference of Governmental Industrial Hygienists ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials BEL = Biological exposure limits BTEX = Benzene, Toluene, Ethylbenzene, Xylenes CAS = Chemical Abstracts Service CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling COC = Cleveland Open-Cup DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level DSL = Canada Domestic Substance List EC = European Commission EC50 = Effective Concentration fifty ECETOC = European Chemicals Agency EINECS = The European Inventory of Existing Commercial Chemical Substances EL50 = Effective Loading fifty

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		 ENCS = Japanese Existing and New Chemical Substances Inventory EWC = European Waste Code GHS = Globally Harmonised System of Classification and Labelling of Chemicals IARC = International Agency for Research on Cancer IATA = International Air Transport Association IC50 = Inhibitory Concentration fifty IL50 = Inhibitory Level fifty IMDG = International Maritime Dangerous Goods INV = Chinese Chemicals Inventory IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables KECI = Korea Existing Chemicals Inventory LC50 = Lethal Concentration fifty LD50 = Lethal Dose fifty per cent. LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading LL50 = Lethal Loading fifty MARPOL = International Exposure - High Production Volume PBT = Persistent, Bioaccumulative and Toxic PICCS = Philippine Inventory of Chemicals and Chemical Substances PNEC = Predicted No Effect Concentration Of Chemicals RID = Regulations Relating to International Carriage of Dan- gerous Goods by Rail SKIN_DES = Skin Designation STEL = Short term exposure limit TRA = Targeted Risk Assessment TSCA = US Toxic Substances Control Act TWA = Time-Weighted Average vPuB = very Persistent and very Bioaccumulative

A vertical bar (|) in the left margin indicates an amendment from the previous version. Due to a change in detail in Section 15, this document has been released as a significant change.

Revision Date

: 08/29/2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN