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SEC	TION 1.	IDENTIFICATION			
	Product	name	:	Shell ATF 134 FE	
	Product	code	:	001D9258	
	Manufa	cturer or supplier's o	deta	ils	
	Manufa	cturer/Supplier	:	Shell Canada Pro 400 - 4th Avenue Calgary AB T2P Canada	S.W
	Telepho Telefax		:	(+1) 8006611600 (+1) 4033848345	
	Emerge ber	ncy telephone num-	:	UTEC (226-8832)): (+1) 613-996-6666; Toll Free: 1-888-CAN- hr): 1 (703) 527-3887 or 1 (800) 424-9300
	Recom	mended use of the c	hen	nical and restriction	ons on use
	Recomr	mended use	:	Transmission oil.	

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification Aspiration hazard	: Category 1
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: H304 May be fatal if swallowed and enters airways. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
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Preca	utionary statements	CENTER/docto P331 Do NOT Storage: P405 Store loc Disposal:	F SWALLOWED: Immediately call a POISON or. induce vomiting.
Conta Other Prolor ing in Used	r hazards which do n	etroleum), C20-50, hy ot result in classifica contact without prope acne/folliculitis. ul impurities.	drotreated neutral oil-based.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	: Shell ATF 134 FE
Chemical nature	 Synthetic base oil and additives. Highly refined mineral oil. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. The highly refined mineral oil is only present as additive dilu- ent.

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Lubricating oils (petroleum), C20-50, hydrotreat- ed neutral oil-based	72623-87-1	75 - 95
Distillates (petroleum), hydrotreated light paraf- finic	64742-55-8	10 - 30
lubricating oils (petroleum), C15-30, hydrotreat- ed neutral oil-based	72623-86-0	10 - 20
Alkyl amine	124-28-7	0.1 - 0.24

SECTION 4. FIRST-AID MEASURES

If inhaled	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.		
In case of skin contact	:	Remove contaminated clothing. Flush exposed area with wa- ter and follow by washing with soap if available.		

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		If persistent i	rritation occurs, obtain medical attention.
In cas	e of eye contact	Remove cont rinsing.	h copious quantities of water. act lenses, if present and easy to do. Continue rritation occurs, obtain medical attention.
lf swa	llowed	If swallowed, medical facili spontaneous If any of the f within the nex ty: fever grea	cy number for your location / facility. do not induce vomiting: transport to nearest ty for additional treatment. If vomiting occurs y, keep head below hips to prevent aspiration. ollowing delayed signs and symptoms appear kt 6 hours, transport to the nearest medical facili- ter than 101° F (38.3°C), shortness of breath, tion or continued coughing or wheezing.
	important symptoms ffects, both acute and ed	coughing, ch congestion, s The onset of al hours after Defatting der ing sensation	ters lungs, signs and symptoms may include oking, wheezing, difficulty in breathing, chest hortness of breath, and/or fever. respiratory symptoms may be delayed for sever- exposure. matitis signs and symptoms may include a burn- and/or a dried/cracked appearance. y result in nausea, vomiting and/or diarrhoea.
Protec	ction of first-aiders	appropriate p	stering first aid, ensure that you are wearing the ersonal protective equipment according to the y and surroundings.
Notes	to physician		chemical pneumonitis. or poison control center for guidance.

SECTION 5. FIRE-FIGHTING MEASURES

1.	15		800001001401
	Special protective equipment	:	Proper protective equipment including chemical resistant
	Specific extinguishing meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment.
			gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
	Specific hazards during fire- fighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and
	Unsuitable extinguishing media	:	Do not use water in a jet.
	Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon diox- ide, sand or earth may be used for small fires only.

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	for firef	ighters		large contact with Breathing Appara a confined space.	vorn; chemical resistant suit is indicated if spilled product is expected. Self-Contained tus must be worn when approaching a fire in Select fire fighter's clothing approved to s (e.g. Europe: EN469).
SEC	TION 6	. ACCIDENTAL RELE	ASE	E MEASURES	
	tive equ	al precautions, protec- uipment and emer- procedures	:	Avoid contact with	a skin and eyes.
	Enviror	mental precautions	:	nation. Prevent fro	ontainment to avoid environmental contami- om spreading or entering drains, ditches or nd, earth, or other appropriate barriers.
				Local authorities s cannot be contain	should be advised if significant spillages ed.
		ls and materials for ment and cleaning up	:	Prevent from spre or other containm Reclaim liquid dire Soak up residue v	It. Avoid accidents, clean up immediately. ading by making a barrier with sand, earth ent material. ectly or in an absorbent. with an absorbent such as clay, sand or other and dispose of properly.
	Additio	nal advice	:	see Chapter 8 of t	election of personal protective equipment his Safety Data Sheet. lisposal of spilled material see Chapter 13 of heet.

SECTION 7. HANDLING AND STORAGE

General Precautions	: Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning mate- rials in order to prevent fires.
Avoidance of contact	: Strong oxidising agents.

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Produ	ict Transfer		ling and bonding procedures should be used transfer operations to avoid static accumulation.
Stora Other	-	place. Use properly l	er tightly closed and in a cool, well-ventilated abeled and closable containers.
Packa	aging material	: Suitable mater	ent temperature. rial: For containers or container linings, use mild ensity polyethylene. iterial: PVC.
Conta	iner Advice		containers should not be exposed to high tem- ause 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
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhal-	5 mg/m3	ACGIH
		able fraction)		

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.

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

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	//www.dguv.de/inhalt/ir titut National de Reche		NRS), France http://www.inrs.fr/accueil
Engi	neering measures	vary depending controls based Appropriate me	otection and types of controls necessary will g upon potential exposure conditions. Select on a risk assessment of local circumstances. easures include: lation to control airborne concentrations.
			is heated, sprayed or mist formed, there is al for airborne concentrations to be generated.
		controls. Educate and tra measures relev product. Ensure approprie equipment used equipment, loca Drain down syst nance. Retain drain do subsequent rec Always observet washing hands drinking, and/or protective equip	ain workers in the hazards and control vant to normal activities associated with this riate selection, testing and maintenance of d to control exposure, e.g. personal protective al exhaust ventilation. Stem prior to equipment break-in or mainte- works in sealed storage pending disposal or cycle. e good personal hygiene measures, such as after handling the material and before eating, r smoking. Routinely wash work clothing and poment to remove contaminants. Discard con- ing and footwear that cannot be cleaned.
Pers	onal protective equip	oment	
Resp	iratory protection	conditions of us In accordance tions should be If engineering of tions to a level select respirato cific conditions Check with resp Where air-filterin priate combinat Select a filter se	protection is ordinarily required under normal se. with good industrial hygiene practices, precau taken to avoid breathing of material. controls do not maintain airborne concentra- which is adequate to protect worker health, by protection equipment suitable for the spe- of use and meeting relevant legislation. piratory protective equipment suppliers. ing respirators are suitable, select an appro- tion of mask and filter. uitable for the combination of organic gases Type A/Type P boiling point >65°C (149°F)].
	I protection emarks	gloves approve	ontact with the product may occur the use of ed to relevant standards (e.g. Europe: EN374, le from the following materials may provide

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		gloves Suita usage, e.g. f sistance of g glove suppli Personal hy Gloves musi gloves, hand cation of a n For continue through time 480 minutes short-term/s recognize th may not be a time maybe and replacer a good pred dependent of Glove thickn	mical protection. PVC, neoprene or nitrile rubber bility and durability of a glove is dependent on requency and duration of contact, chemical re- glove material, dexterity. Always seek advice from ers. Contaminated gloves should be replaced. giene is a key element of effective hand care. t only be worn on clean hands. After using ds should be washed and dried thoroughly. Appli- on-perfumed moisturizer is recommended. bus contact we recommend gloves with break- e of more than 240 minutes with preference for > where suitable gloves can be identified. For plash protection we recommend the same, but at suitable gloves offering this level of protection available and in this case a lower breakthrough acceptable so long as appropriate maintenance ment regimes are followed. Glove thickness is not ictor of glove resistance to a chemical as it is on the exact composition of the glove material. tess should be typically greater than 0.35 mm on the glove make and model.
Eye	protection		handled such that it could be splashed into eyes, yewear is recommended.
Skir	and body protection	work clothes	ion is not ordinarily required beyond standard S. actice to wear chemical resistant gloves.
The	rmal hazards	: Not applicat	le
Prot	ective measures		otective equipment (PPE) should meet recom- ional standards. Check with PPE suppliers.
Env	ironmental exposure c	ontrols	
Gen	eral advice	: Take approp	priate measures to fulfill the requirements of rele-

/ 1 1 1 1 1 1 1 1	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 discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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	Appear	ance	:	Liquid at room te	mperature.
	Colour		:	blue	
	Odour		:	Slight hydrocarbo	on
	Odour ⁻	Threshold	:	Data not availabl	e
	рН		:	Not applicable	
	pour po	bint	:	-51 °C / -60 °F Method: ASTM D	997
	Initial b range	oiling point and boiling	:	> 280 °C / 536 °F estimated value(s	
	Flash p	oint	:	185 °C / 365 °F	
				Method: ASTM D	092 (COC)
	Evapor	ation rate	:	Data not availabl	e
	Flamma	ability (solid, gas)	:	Data not availabl	е
	Upper e	explosion limit	:	Typical 10 %(V)	
	Lower e	explosion limit	:	Typical 1 %(V)	
	Vapour	pressure	:	< 0.5 Pa (20 °C / estimated value(s	
	Relative	e vapour density	:	> 1 estimated value(s	s)
	Relative	e density	:	0.845 (15 °C / 59	°F)
	Density	,	:	845 kg/m3 (15.0	°C / 59.0 °F)Method: ASTM D4052
	Solubili Wate	ty(ies) er solubility	:	negligible	
	Solu	bility in other solvents	:	Data not availabl	е
	Partition octanol	n coefficient: n- /water	:	log Pow: > 6 (based on inform	ation on similar products)
	Auto-ig	nition temperature	:	> 320 °C / 608 °F	-
	Decom	position temperature	:	Data not availabl	e
	Viscosi	ty			

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	cosity, dynamic cosity, kinematic	: Data not ava : 19 mm2/s (4 Method: AST	0.0 °C / 104.0 °F)
		4.4 mm2/s (1 Method: AS1	100 °C / 212 °F) TM D445
Explo	sive properties	: Not classified	t
Oxidiz	zing properties	: Data not ava	ilable
Cond	uctivity	: This material	is not expected to be a static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
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): > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
	Remarks: Aspiration into the lungs may cause chemical

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		pneumonitis which	ch can be fatal.
Acute	inhalation toxicity	: Remarks: Based are not met.	on available data, the classification criteria
Acute dermal toxicity		: LD50 (Rabbit): > Remarks: Low to Based on availat	

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. 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:

Genotoxicity in vivo	:	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.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies.

Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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OSHA NTP		equal to 0.1% is on	s product present at levels greater than or OSHA's list of regulated carcinogens. s product present at levels greater than or	
		equal to 0.1% is identified as a known or anticipated carcinogen by NTP.		
Repro	ductive toxicity			
Produce Effects	<u>ct:</u> on fertility	Does not impair f	levelopmental toxicant. ertility. le data, the classification criteria are not met.	

STOT - single exposure

Product:

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

STOT - repeated exposure

Product:

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

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Further information

Product:

Remarks: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal.

ALL used oil should be handled with caution and skin contact avoided as far as possible.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	: Ecotoxicological data have not been determined specifically for this product.
	Information given is based on a knowledge of the components and the ecotoxicology of similar products.

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		tive of the proc ponent(s).(LL/I	ed otherwise, the data presented is representa- duct as a whole, rather than for individual com- EL/IL50 expressed as the nominal amount of ed to prepare aqueous test extract).		
Ecot	oxicity				
<u>Prod</u> Toxic ty)	<u>uct:</u> ity to fish (Acute toxici-	Practically non	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.		
Toxic toxici	ity to crustacean (Acute ty)	Practically non	Remarks: LL/EL/IL50 > 100 mg/I Practically non toxic: Based on available data, the classification criteria are not met.		
	ity to algae/aquatic s (Acute toxicity)	Practically non	EL/IL50 > 100 mg/I toxic: lable data, the classification criteria are not met.		
Toxic icity)	ity to fish (Chronic tox-	: Remarks: Data	a not available		
(Chro Toxic	ity to crustacean nic toxicity) ity to microorganisms e toxicity)	: Remarks: Data : Remarks: Data			
Persi	stence and degradabil	ity			
<u>Prod</u> Biode	<u>uct:</u> egradability	Major constitue	readily biodegradable. ents are inherently biodegradable, but contains nat may persist in the environment.		
Bioa	ccumulative potential				
<u>Prod</u>	uct:				
Bioad	ccumulation	: Remarks: Con cumulate.	tains components with the potential to bioac-		
	on coefficient: n- : log Pow: > 6 ol/water : Remarks: (based on information on similar products)		sed on information on similar products)		
Mobi	lity in soil				
<u>Prod</u> Mobil		: Remarks: Liqu	id under most environmental conditions.		
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		lf it enters soil, mobile.	it will adsorb to soil particles and will not be	
		Remarks: Floats on water.		
Oth	er adverse effects			
Pro	duct:			
Additional ecological infor- mation		: Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential. Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use.		
		Poorly soluble Causes physica	mixture. al fouling of aquatic organisms.	

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

TDG

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Not regulated as a dangerous good

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

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

Safety, health and environmental regulations/legislation specific for the substance or mixture

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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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

Full text of other abbreviations

AIIC -Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - Interna-

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tional Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk: IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC -No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Verv Persistent and Verv Bioaccumulative: WHMIS -Workplace Hazardous Materials Information System

A vertical bar (|) in the left margin indicates an amendment from the previous version.

Revision Date

: 2018-08-08

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.

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