

Ver 5.3	sion	Revision Date: 10.10.2019		DS Number: 331476-00034	Date of last issue: 06.11.2018 Date of first issue: 27.02.2017				
SE	SECTION 1: Identification of the substance/mixture and of the company/undertaking								
1.1	Produc	t identifier							
	Trade	name	:	Krytox™ GPL 25	5				
	SDS-lo	lentcode	:	13000028048					
1.2	Relevar	nt identified uses of t	he s	substance or mixt	ure and uses advised against				
		the Sub- /Mixture	:	Lubricant					
	Recom on use	mended restrictions	:	tions involving im internal body fluid written agreemen	only. ell Chemours™ materials in medical applica- plantation in the human body or contact with ls or tissues unless agreed to by Seller in a t covering such use. For further information, ur Chemours representative.				
1.3	Details	of the supplier of the	e sat	etv data sheet					
	Compa		:	Chemours Nether Baanhoekweg 22 3313 LA Dordreck					
	Teleph	one	:	+31-(0)-78-630-1	011				
	Telefax	K	:	+31-78-6163737					
		address of person sible for the SDS	:	sds-support@che	emours.com				

#### 1.4 Emergency telephone number

0-800-983-611 (Toll free in-country) or +(44)-870-8200418

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) Not a hazardous substance or mixture.

#### 2.3 Other hazards

The thermal decomposition vapours of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

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SECTION	N 3: Composition/inf	orm	nation on ingre	dients
3.2 Mixtur	res			
Com	ponents			
Rema		:	No hazardous ir	ngredients
SECTION	V 4: First aid measur	es		
4.1 Descri	iption of first aid meas	sure	s	
Prote	ction of first-aiders	:	No special prec	autions are necessary for first aid responders.
lf inha	aled	:	If inhaled, remo Get medical atte	ve to fresh air. ention if symptoms occur.
In cas	se of skin contact	:		er and soap as a precaution. ention if symptoms occur.
In cas	se of eye contact	:	•	water as a precaution. ention if irritation develops and persists.
lf swa	allowed	:	Get medical atte	O NOT induce vomiting. ention if symptoms occur. oroughly with water.
4.2 Most i	mportant symptoms a	ind o	effects, both acu	ite and delayed
Symp	otoms	:	Inhalation may Irritation Lung oedema	provoke the following symptoms:
			Eye contact ma Blurred vision Discomfort Lachrymation	y provoke the following symptoms
			Skin contact ma Irritation Redness	ay provoke the following symptoms:
4.3 Indica	tion of any immediate	me	dical attention a	nd special treatment needed
Treat	ment	:	Treat symptoma	atically and supportively.
SECTION	N 5: Firefighting mea	sur	es	
5.1 Extino	uishing media			
-	ble extinguishing media	:	Not applicable Will not burn	

Unsuitable extinguishing : Not applicable



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media	a		Will not burn				
5.2 Specia	al hazards arising from	the	substance or mi	xture			
Spec fightir	-	:	Exposure to combustion products may be a hazard to health.				
Haza ucts	rdous combustion prod-	:	Hydrogen fluoride carbonyl fluoride potentially toxic fl aerosolized partic Carbon oxides	uorinated compounds			
5.3 Advic	e for firefighters						
•	ial protective equipment efighters	:		ed breathing apparatus for firefighting if nec- onal protective equipment.			
Spec ods	ific extinguishing meth-	:	cumstances and Use water spray	g measures that are appropriate to local cir- the surrounding environment. to cool unopened containers. ged containers from fire area if it is safe to do			

#### **SECTION 6: Accidental release measures**

6.1 Personal precautions, protec	tive	equipment and emergency procedures
Personal precautions	:	Follow safe handling advice and personal protective equip- ment recommendations.
6.2 Environmental precautions		
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
6.3 Methods and material for cor	ntain	ment and cleaning up
Methods for cleaning up	:	Soak up with inert absorbent material. For large spills, provide dyking or other appropriate contain- ment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor- bent. Local or national regulations may apply to releases and dis- posal of this material, as well as those materials and items
		employed in the cleanup of releases. You will need to deter- mine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.



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	<b>6.4 Reference to other sections</b> See sections: 7, 8, 11, 12 and 13.								
SECTIO	N 7: Handling and st	ora	ge						
7.1 Preca	utions for safe handlir	ng							
Tech	nical measures	:		measures under EXPOSURE RSONAL PROTECTION section.					
Loca	I/Total ventilation	:	Use only with ade	equate ventilation.					
Advid	ce on safe handling	:	practice, based o sessment	ance with good industrial hygiene and safety on the results of the workplace exposure as- vent spills, waste and minimize release to the					
Hygie	ene measures	:	flushing systems	emical is likely during typical use, provide eye and safety showers close to the working og do not eat, drink or smoke. Wash contami- fore re-use.					
7.2 Cond	itions for safe storage,	inc	luding any incom	patibilities					
	irements for storage s and containers	:	Keep in properly the particular nat	labelled containers. Store in accordance with ional regulations.					
Advid	ce on common storage	:	No special restric	ctions on storage with other products.					
	er information on stor- stability	:	No decompositio	n if stored and applied as directed.					

### 7.3 Specific end use(s)

Specific use(s) : No data available

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrofluoric acid	7664-39-3	STEL OEL-ŔL	3 ppm 2,5 mg/m3 (Fluorine)	ZA OEL
Further information Recomm		ed Limit		
		TWA	1,8 ppm 1,5 mg/m3	2000/39/EC
		STEL	3 ppm 2,5 mg/m3	2000/39/EC



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Carbo	onyl difluoride	353-50-4	TWA	2,5 mg/m3 (Fluorine)	2000/39/EC			
Carbo	on dioxide	124-38-9	STEL OEL-RL	15.000 ppm 27.000 mg/m3	ZA OEL			
Furth	er information	Recommend	ed Limit					
			TWA OEL-RL	5.000 ppm 9.000 mg/m3	ZA OEL			
Furth	er information	Recommended Limit						
			TWA	5.000 ppm 9.000 mg/m3	2006/15/EC			
Carbo	on monoxide	630-08-0	TWA OEL-RL	50 ppm 55 mg/m3	ZA OEL			
Furth	er information	Recommended Limit						
			STEL OEL-RL	300 ppm 330 mg/m3	ZA OEL			
Further information		Recommended Limit						
			TWA	20 ppm 23 mg/m3	2017/164/EU			
			STEL	100 ppm 117 mg/m3	2017/164/EU			

#### 8.2 Exposure controls

#### **Engineering measures**

Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

#### Personal protective equipment

Eye protection		Wear the following personal protective equipment: Safety glasses
Hand protection		
Remarks	:	Wash hands before breaks and at the end of workday.
Skin and body protection	:	Skin should be washed after contact.
Respiratory protection	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection.
Filter type	:	Combined particulates, acidic gas/vapour and organic vapour type (AE-P)

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Appearance	:	Grease
Colour	:	white
Odour	:	odourless



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Od	our Threshold	:	No data available	9
рН		:	7	
Ме	Iting point/freezing point	:	320 °C	
Init rar	ial boiling point and boiling nge	:	No data available	9
Fla	ish point	:	Not applicable	
Eva	aporation rate	:	Not applicable	
Fla	mmability (solid, gas)	:	Will not burn	
Up flar	per explosion limit / Upper mmability limit	:	No data available	
	wer explosion limit / Lower mmability limit	:	No data available	9
Va	pour pressure	:	Not applicable	
Re	lative vapour density	:	Not applicable	
Re	lative density	:	1,89	
	lubility(ies) Water solubility	:	insoluble	
	rtition coefficient: n- anol/water	:	Not applicable	
Au	to-ignition temperature	:	No data available	9
De	composition temperature	:	300 °C	
	cosity Viscosity, kinematic	:	Not applicable	
Ex	plosive properties	:	Not explosive	
Ox	idizing properties	:	The substance o	r mixture is not classified as oxidizing.
9.2 Oth	er information			
Pa	rticle size	:	No data available	9

# **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

Not classified as a reactivity hazard.



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10.2 Cher	10.2 Chemical stability									
Stabl	Stable under normal conditions.									
10.3 Poss	bibility of hazardous r	eaction	s							
Hazardous reactions			Hazardous decomposition products will be formed at elevated temperatures.							
10.4 Cond	ditions to avoid									
Conditions to avoid		: 1	None known.							
10.5 Incol	mpatible materials									
Materials to avoid		: 1	: None.							
10.6 Haza	rdous decompositior	n produ	cts							
Thermal decomposition		(	Hydrofluoric acid Carbonyl difluoride Carbon dioxide Carbon monoxide							
SECTION	SECTION 11: Toxicological information									

#### 11.1 Information on toxicological effects

Information on likely routes of	:	Skin contact
exposure		Ingestion
		Eye contact

#### Acute toxicity

Not classified based on available information.

#### Skin corrosion/irritation

Not classified based on available information.

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

#### Germ cell mutagenicity

Not classified based on available information.

#### Carcinogenicity

Not classified based on available information.

#### Reproductive toxicity

Not classified based on available information.

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Not o STO	<b>STOT - single exposure</b> Not classified based on available information. <b>STOT - repeated exposure</b> Not classified based on available information.								
Asp	Aspiration toxicity Not classified based on available information.								
Exp	Experience with human exposure								
	luct: contact	:	Symptoms: Irritat	ion, Redness					
Eye	contact	:	Symptoms: Disco	omfort, Blurred vision, Lachrymation					

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

No data available

#### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

Not relevant

#### 12.6 Other adverse effects

No data available

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product

#### emous

 Dispose of in accordance with local regulations.
 According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
 Waste codes should be assigned by the user, preferably in

- discussion with the waste disposal authorities.

   Contaminated packaging
   : Empty containers should be taken to an approved waste han
  - dling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

#### **SECTION 14: Transport information**

#### 14.1 UN number

Not regulated as a dangerous good



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•	roper shipping name		
	sport hazard class(e	•	
14.4 Pack Not re	<b>ing group</b> egulated as a dangero	ous good	
	<b>conmental hazards</b> egulated as a dangero	ous good	
	ial precautions for upplicable	ser	
14.7 Trans	sport in bulk accord	ing to Annex II of Mar	pol and the IBC Code
<b>D</b>	arks	: Not applicable	for product as supplied.

# 15.2 Chemical safety assessment

ture

A Chemical Safety Assessment has not been carried out.

#### **SECTION 16: Other information**

Other information	Krytox <sup>™</sup> and any associated logos are trademarks or copy- rights of The Chemours Company FC, LLC. Chemours <sup>™</sup> and the Chemours Logo are trademarks of The Chemours Company. Before use read Chemours safety information. For further information contact the local Chemours office or nominated distributors.					
	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.					
Full text of other abbreviations						
2000/39/EC	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values					
2006/15/EC	Europe. Indicative occupational exposure limit values					
2017/164/EU	Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Direc- tives 91/322/EEC, 2000/39/EC and 2009/161/EU					
ZA OEL	South Africa. Hazardous Chemical Substances Regulations, Occupational Exposure Limits					
2000/39/EC / TWA	Limit Value - eight hours					
2000/39/EC / STEL	Short term exposure limit					
	Limit Value - eight hours					
	Short term exposure limit					
2017/164/EU / TWA	Limit Value - eight hours					



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# ZA OEL / TWA OEL-RL:Long term occupational exposure limits - recommended limitZA OEL / STEL OEL-RL:Short term occupational exposure limits - recommended limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

#### Further information

Sources of key data used to	
compile the Safety Data	
Sheet	

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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