

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

Section 1: Identification

Product name : Krytox™ 283AC

SDS-Identcode : 130000031472

Manufacturer or supplier's details

Company : The Chemours Malaysia Sdn. Bhd. (for use in New Zealand)

Address : Suite 20-01 & 20-02B, Level 20, The Pinnacle, Persiaran Lagoon, Bandar Sunway, Subang Jaya
Selangor Darul Ehsan 47500 Malaysia

Telephone : +60 3 5021 0178

Emergency telephone number : NZ Poisons Information Centre: 0800 764766 ; NZ Transport
Emergency: +64 9 801 0034

Telefax : +60 3 2178 4719

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

Restrictions on use : For industrial use only.
Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

Section 2: Hazard identification

GHS Classification

Specific target organ toxicity - repeated exposure : Category 2

Hazardous to the aquatic environment - chronic hazard : Category 3

GHS label elements

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue:
4.2	22.05.2024	1790280-00014	02.11.2023
			Date of first issue: 27.06.2017

Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

:

Prevention:

P273 Avoid release to the environment.

Response:

P314 Get medical advice/ attention if you feel unwell.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

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

Section 3: Composition/information on ingredients

Substance / Mixture

:

Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Sodium nitrite	7632-00-0	>= 2.5 -< 10

Section 4: First-aid measures

If inhaled

:

If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact

:

Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact

:

Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed

:

If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms

:

Inhalation may provoke the following symptoms:

SAFETY DATA SHEET



Krytox™ 283AC

Version 4.2	Revision Date: 22.05.2024	SDS Number: 1790280-00014	Date of last issue: 02.11.2023 Date of first issue: 27.06.2017
----------------	------------------------------	------------------------------	---

and effects, both acute and delayed	Irritation Lung oedema Eye contact may provoke the following symptoms Blurred vision Discomfort Lachrymation Skin contact may provoke the following symptoms: Irritation Redness Inhalation may provoke the following symptoms: Irritation Shortness of breath May cause damage to organs through prolonged or repeated exposure.
Protection of first-aiders	: No special precautions are necessary for first aid responders.
Notes to physician	: Treat symptomatically and supportively.

Section 5: Fire-fighting measures

Suitable extinguishing media	: Not applicable Will not burn
Unsuitable extinguishing media	: Not applicable Will not burn
Specific hazards during fire-fighting	: Exposure to combustion products may be a hazard to health.
Hazardous combustion products	: Hydrogen fluoride carbonyl fluoride potentially toxic fluorinated compounds aerosolized particulates Carbon oxides Nitrogen oxides (NOx) Metal oxides
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Section 6: Accidental release measures

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

- Personal precautions, protective equipment and emergency procedures : Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
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.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment 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 absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Section 7: Handling and storage

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment.

Do not breathe decomposition products.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
- Conditions for safe storage : Keep in properly labelled containers.
Store in accordance with the particular national regulations.
- Materials to avoid : No special restrictions on storage with other products.
- Further information on storage stability : No decomposition if stored and applied as directed.

SAFETY DATA SHEET



Krytox™ 283AC

Version 4.2 Revision Date: 22.05.2024 SDS Number: 1790280-00014 Date of last issue: 02.11.2023
Date of first issue: 27.06.2017

Section 8: Exposure controls/personal protection

Components with workplace 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 / Permissible concentration	Basis
hydrofluoric acid	7664-39-3	WES-Ceiling	3 ppm 2.6 mg/m ³ (Fluorine)	NZ OEL
	Further information: Exposure can also be estimated by biological monitoring			
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
Carbonyl difluoride	353-50-4	WES-STEL	5 ppm 13 mg/m ³	NZ OEL
		WES-TWA	2 ppm 5.4 mg/m ³	NZ OEL
		TWA	2 ppm	ACGIH
		STEL	5 ppm	ACGIH
Carbon dioxide	124-38-9	WES-STEL	30,000 ppm 54,000 mg/m ³	NZ OEL
		WES-TWA	5,000 ppm 9,000 mg/m ³	NZ OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
Carbon monoxide	630-08-0	WES-TWA	20 ppm	NZ OEL
	Further information: Ototoxin, Exposure can also be estimated by biological monitoring			
		WES-Ceiling	200 ppm	NZ OEL
	Further information: Ototoxin, Exposure can also be estimated by biological monitoring			
		WES-STEL	100 ppm	NZ OEL
	Further information: Ototoxin, Exposure can also be estimated by biological monitoring			
		TWA	25 ppm	ACGIH

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

Personal protective equipment

SAFETY DATA SHEET



Krytox™ 283AC

Version 4.2	Revision Date: 22.05.2024	SDS Number: 1790280-00014	Date of last issue: 02.11.2023 Date of first issue: 27.06.2017
----------------	------------------------------	------------------------------	---

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

Section 9: Physical and chemical properties

Appearance	:	Grease
Colour	:	white
Odour	:	odourless
Odour Threshold	:	No data available
pH	:	7
Melting point/freezing point	:	320 °C
Initial boiling point and boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Will not burn
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	1.89 - 1.93 hPa

SAFETY DATA SHEET



Krytox™ 283AC

Version 4.2	Revision Date: 22.05.2024	SDS Number: 1790280-00014	Date of last issue: 02.11.2023 Date of first issue: 27.06.2017
----------------	------------------------------	------------------------------	---

Relative vapour density	: Not applicable
Relative density	: 1.89 - 1.93
Solubility(ies) Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: 320 °C
Viscosity Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle characteristics Particle size	: No data available

Section 10: Stability and reactivity

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	: None known.
Incompatible materials	: None.

Hazardous decomposition products

Thermal decomposition	: hydrofluoric acid Carbonyl difluoride Carbon dioxide Carbon monoxide
-----------------------	---

Section 11: Toxicological information

Exposure routes	: Skin contact Ingestion Eye contact
-----------------	--

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity

Components:

Sodium nitrite:

Acute oral toxicity : LD50 (Rat): 180 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Components:

Sodium nitrite:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Sodium nitrite:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Method : OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

Components:

Sodium nitrite:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: positive
		Test Type: In vitro mammalian cell gene mutation test Result: positive
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative
		Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: Intraperitoneal injection Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Sodium nitrite:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	2 Years
Result	:	negative

Reproductive toxicity

Not classified based on available information.

Components:

Sodium nitrite:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative

STOT - single exposure

Not classified based on available information.

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Sodium nitrite:

Assessment	:	May cause damage to organs through prolonged or repeated exposure.
Remarks	:	Based on national or regional regulation.

Repeated dose toxicity

Components:

Sodium nitrite:

Species	:	Rat
NOAEL	:	10 mg/kg
Application Route	:	Ingestion
Exposure time	:	2 yr

Aspiration toxicity

Not classified based on available information.

Section 12: Ecological information

Ecotoxicity

Components:

Sodium nitrite:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.54 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 15.4 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus capricornutum (fresh water algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Scenedesmus capricornutum (fresh water algae)): 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic tox-)	:	NOEC (Cyprinus carpio (Carp)): 21 mg/l

SAFETY DATA SHEET



Krytox™ 283AC

Version 4.2	Revision Date: 22.05.2024	SDS Number: 1790280-00014	Date of last issue: 02.11.2023 Date of first issue: 27.06.2017
----------------	------------------------------	------------------------------	---

icity) Exposure time: 30 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Penaeid Shrimp): 9.86 mg/l
Exposure time: 80 d

Toxicity to microorganisms : EC50: 281 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.
Remarks: Based on national or regional regulation.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Section 13: Disposal considerations

Disposal methods

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

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

Section 14: Transport information

International Regulations

UNRTDG

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Environmentally hazardous	: no

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

IATA-DGR

UN/ID No.	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Packing instruction (cargo aircraft)	: Not applicable
Packing instruction (passenger aircraft)	: Not applicable

IMDG-Code

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
EmS Code	: Not applicable
Marine pollutant	: Not applicable

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

Not applicable for product as supplied.

National Regulations

NZS 5433

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Hazchem Code	: Not applicable

Special precautions for user

Not applicable

Section 15: Regulatory information

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

HSNO Approval Number

HSR002606 Lubricants Lubricant Additives Coolants and Anti freeze Agents Subsidiary Hazard Group Standard

Tolerable Exposure Limits (TEL)

Not applicable

Environmental Exposure Limits (EEL)

Not applicable

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

HSW Controls

Certified handler certificate not required.

Tracking hazardous substance not required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

Section 16: Other information

Revision Date : 22.05.2024

Other information : Krytox™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC.
Chemours™ 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.

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/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
ACGIH / C : Ceiling limit
NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average
NZ OEL / WES-STEEL : Workplace Exposure Standard - Short-Term Exposure Limit
NZ OEL / WES-Ceiling : Workplace Exposure Standard - Ceiling

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; 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 - 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 Con-

SAFETY DATA SHEET



Krytox™ 283AC

Version	Revision Date:	SDS Number:	Date of last issue: 02.11.2023
4.2	22.05.2024	1790280-00014	Date of first issue: 27.06.2017

centration 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; TECI - Thailand Existing Chemicals 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; WHMIS - Workplace Hazardous Materials Information System

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.

NZ / EN