

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations SDS ID: 8169323 Issue date: 04.08.2023 Revision date: 18.12.2023 Version: 1.1

SECTION 1: Identification	
1.1. Identification	
Product form Substance name CAS-No. Product code Formula Other means of identification <b>1.2. Recommended use and restrictions on</b>	<ul> <li>Substance</li> <li>N,N-Dimethylperfluorooctanesulfonamide</li> <li>213181-78-3</li> <li>8169-3-23</li> <li>C10H6F17NO2S</li> <li>MFCD17014766</li> </ul>
Use of the substance/mixture	: Laboratory chemicals Manufacture of substances Scientific research and development
1.3. Supplier	
SynQuest Laboratories, Inc. Inc. P.O. Box 309 Alachua, FL, Alachua, 32615 United States of America T (386) 462-0788 - F (386) 462-7097 info@synquestlabs.com - www.synquestlabs.com	
1.4. Emergency telephone number	
Emergency number	: (844) 523-4086 (3E Company - Account 10069)
SECTION 2: Hazard(s) identification	
2.1. Classification of the substance or mix	ture

#### **GHS US classification**

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (dermal) Category 4	H312	Harmful in contact with skin
Acute toxicity (inhalation) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

:

Full text of H statements : see section 16

2.2. GHS Lab	el elements,	including precau	itionary statements
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#### **GHS US labeling**

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard statements (GHS US)



H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled : H315 - Causes skin irritation

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	H319 - Causes serious eye irritation
	H335 - May cause respiratory irritation
Precautionary statements (GHS US)	: P261 - Avoid breathing dust, mist, spray.
	P264 - Wash skin thoroughly after handling
	P270 - Do not eat, drink or smoke when using this product.
	P271 - Use only outdoors or in a well-ventilated area.
	P280 - Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P312 - If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell
	P302+P352 - If on skin: Wash with plenty of soap and water
	P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove
	contact lenses, if present and easy to do. Continue rinsing.
	P312 - Call a POISON CENTER or doctor/physician if you feel unwell
	P321 - Specific treatment (see supplemental first aid instructions on this label)
	P322 - Specific treatment (see supplemental first aid instruction on this label)
	P330 - Rinse mouth.
	P332+P313 - If skin irritation occurs: Get medical advice/attention.
	P337+P313 - If eye irritation persists: Get medical advice/attention.
	P362+P364 - Take off contaminated clothing and wash it before reuse.
	P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
	P405 - Store locked up.
	P501 - Dispose of contents/container to an approved waste disposal plant

## 2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

# SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type

: Mono-constituent

Name	Product identifier	%	GHS US classification
N,N-Dimethylperfluorooctanesulfonamide (Main constituent)	CAS-No.: 213181-78- 3		Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general	: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.
4.2. Most important symptoms and effect	s (acute and delayed)
Symptoms/effects	: The most important known symptoms and effects are described in the labelling (see section 2.2)

and/or in section 11.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures	
5.1. Suitable (and unsuitable) extinguishing	media
Suitable extinguishing media	: Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.
5.2. Specific hazards arising from the chem	ical
Fire hazard Explosion hazard	<ul> <li>Thermal decomposition generates: Carbon oxides. Hydrogen fluoride. Nitrogen oxides. Sulfur oxides.</li> <li>Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.</li> </ul>
5.3. Special protective equipment and preca	autions for fire-fighters
Firefighting instructions Protection during firefighting	<ul> <li>In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.</li> <li>Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".</li> </ul>

SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipr	nent and emergency procedures	
General measures	: Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe dust.	
6.1.1. For non-emergency personnel Emergency procedures	: Only qualified personnel equipped with suitable protective equipment may intervene.	
6.1.2. For emergency responders Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	

### 6.2. Environmental precautions

This material is considered to be a "Forever chemical". Prevent any possible release to the environment. Notify authorities if product enters sewers or public waters. Contain any spills with dikes or absorbents to prevent migration and entry into drains, sewers, waterways, or soil. Do not use where release to drains (sewer) and/or surface water cannot be prevented.

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6.3. Methods and material for containment and cleaning up		
For containment	: Stop leak if safe to do so. Contain any spills with dikes or absorbents to prevent migration and entry into drains, sewers, waterways, or soil. Do not use where release to drains (sewer) and/or surface water cannot be prevented.	
Methods for cleaning up	: Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area.	
Other information	: For disposal of solid materials or residues refer to section 13 : "Disposal considerations".	
6.4. Reference to other sections		

#### No additional information available

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling Hygiene measures	<ul> <li>Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes.</li> <li>Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.</li> </ul>
7.2. Conditions for safe storage, including	any incompatibilities
Technical measures Storage conditions Incompatible materials Storage area	<ul> <li>Comply with applicable regulations.</li> <li>Keep container closed when not in use.</li> <li>Refer to Section 10 on Incompatible Materials.</li> <li>Store in dry, cool, well-ventilated area. Store ONLY in areas where release to drains (sewer) and/or surface water can be prevented. This material is considered to be a "Forever chemical". Any possible release to the environment must be prevented. Notify authorities if product enters sewers or public waters.</li> </ul>

# SECTION 8: Exposure controls/personal protection

8.1. Control parameters		
N,N-Dimethylperfluorooctanesulfonamide (2	213181-78-3)	
No additional information available		
8.2. Appropriate engineering controls		
Appropriate engineering controls	: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.	
8.3. Individual protection measures/Persona	Il protective equipment	
Hand protection:		
protective gloves. 29 CFR 1910.138: Hand Protection		
Eye protection:		
Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection		
Skin and body protection:		
Wear suitable protective clothing		

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#### **Respiratory protection:**

In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection

### Personal protective equipment symbol(s):



#### Other information:

Safety shoes. 29 CFR 1910.136: Foot Protection.

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

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

Physical state	: Solid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
рН	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Molecular mass	: 527,2 g/mol
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

No additional information available

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

**10.2. Chemical stability** 

The product is stable at normal handling and storage conditions.

**10.3. Possibility of hazardous reactions** 

No additional information available

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### **10.4. Conditions to avoid**

Keep away from heat, sparks and flame.

**10.5. Incompatible materials** 

Strong oxidizing agents.

**10.6. Hazardous decomposition products** 

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information		
11.1. Information on toxicological effects		
Acute toxicity (oral):Acute toxicity (dermal):Acute toxicity (inhalation):	Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.	
N,N-Dimethylperfluorooctanesulfonamide (21	3181-78-3)	
ATE US (oral)	500 mg/kg body weight	
ATE US (dermal)	1100 mg/kg body weight	
ATE US (gases)	4500 ppmV/4h	
ATE US (vapors)	11 mg/l/4h	
ATE US (dust, mist)	1,5 mg/l/4h	
Skin corrosion/irritation :	Causes skin irritation.	
Serious eye damage/irritation :	Causes serious eye irritation.	
Respiratory or skin sensitization :	Not classified	
Germ cell mutagenicity :	Not classified	
Carcinogenicity :	Not classified	
Reproductive toxicity :	Not classified	
STOT-single exposure :	May cause respiratory irritation.	
STOT-repeated exposure :	Not classified	
Aspiration hazard :	Not classified	
Viscosity, kinematic :	No data available	
Symptoms/effects :	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.	

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

#### 12.1. Toxicity

#### No additional information available

12.2. Persistence and degradability		
N,N-Dimethylperfluorooctanesulfonamide (213181-78-3)		
Persistence and degradability	Not readily biodegradable. May cause long-term adverse effects in the environment. PBT - Persistent, Bioaccumulative and Toxic.	

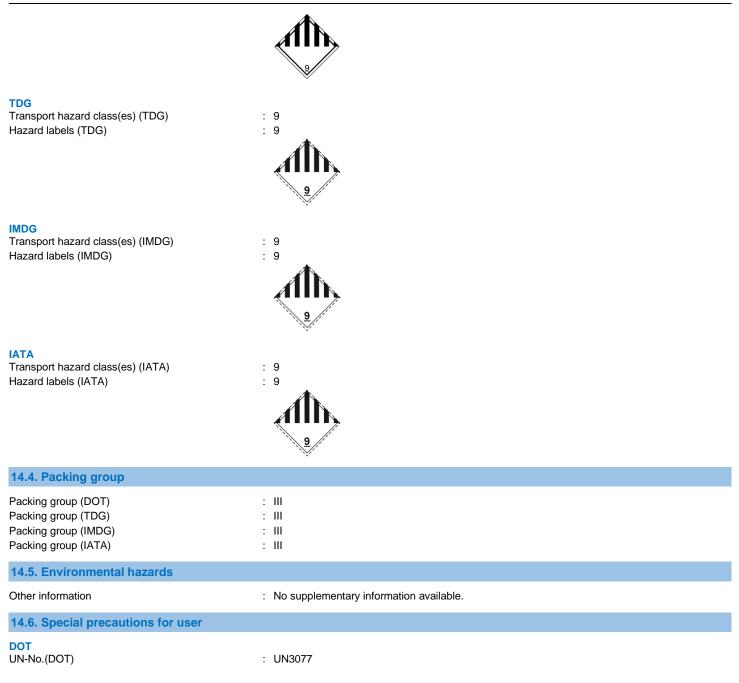
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12.3. Bioaccumulative potential		
N,N-Dimethylperfluorooctanesulfonamide (213181-78-3)		
Bioaccumulative potential	Perfluorinated alkanes (PFAs, "forever chemicals") are long lasting, widely used chemicals that break down slowly over time. The potential hazards of PFAs are under investigation and have not been established.	
12.4. Mobility in soil		
No additional information available		
12.5. Other adverse effects		
No additional information available		
SECTION 13: Disposal considerations		
13.1. Disposal methods		
Waste treatment methods	: Prevent runoff from entering drains, sewers or waterways. See the EPA's Interim Guidance on	

SECTION 13: Disposal considerations	3
13.1. Disposal methods	
Waste treatment methods	: Prevent runoff from entering drains, sewers or waterways. See the EPA's Interim Guidance on PFAS Destruction and Disposal.
Sewage disposal recommendations	: See the EPA's Interim Guidance on PFAS Destruction and Disposal.
Product/Packaging disposal recommendations	: See the EPA's Interim Guidance on PFAS Destruction and Disposal.
Additional information	: EPA's Interim Guidance on PFAS Destruction and Disposal (Dec. 18, 2020    https://downloads.regulations.gov/EPA-HQ-OLEM-2020-0527-0002/content.pdf). The National Defense Authorization Act for Fiscal Year 2020, Public Law No: 116-92 (hereafter, "FY 2020 NDAA"), was signed into law on December 19, 2019. Section 7361 of the FY 2020 NDAA directs the U.S. Environmental Protection Agency (EPA) to publish interim guidance on the destruction and disposal of perfluoroalkyl and polyfluoroalkyl substances (PFAS) and materials containing PFAS. This interim guidance fulfills that direction. EPA will review the interim guidance at least every 3 years and revise it, if appropriate based on the availability of new information or other factors.
Ecology - waste materials	: This material is considered to be a "Forever chemical". Prevent any possible release to the environment. Do not discharge into drains. Take all necessary measures to prevent accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems, or emergency response.

SECTION 14: Transport information	
14.1. UN number	
DOT NA No UN-No. (TDG) UN-No. (IMDG) UN-No. (IATA)	: UN3077 : UN3077 : 3077 : 3077
14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG) Proper Shipping Name (IMDG) Proper Shipping Name (IATA)	<ul> <li>Environmentally hazardous substances, solid, n.o.s.</li> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</li> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</li> <li>Environmentally hazardous substance, solid, n.o.s.</li> </ul>
14.3. Transport hazard class(es)	
<b>DOT</b> Transport hazard class(es) (DOT) Hazard labels (DOT)	: 9 : 9

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DOT Special Provisions (49 CFR 172.102)	<ul> <li>8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.</li> <li>146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.</li> <li>335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.</li> <li>384 - For transportation by motor vehicle, substances meeting the conditions for high viscosity flammable liquids as prescribed in §173.121(b)(1)(i), (b)(1)(ii), and (b)(1)(iv) of this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg:</li> <li>a. Metai: 11A, 11B, 11N, 21A, 21B and 21N</li> <li>b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2</li> <li>c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2</li> <li>d. Fiberboard: 11G</li> <li>e. Wooden: 11C, 11D and 11F (with inner liners)</li> <li>f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant l</li></ul>
	<ul> <li>IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.</li> <li>N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle.</li> <li>N91 - The use of a non specification sift-proof, non-bulk, metal can with or without lid, or a non specification sift-proof, non-bulk fiber drum, with or without lid is authorized when transporting coal tar pitch compounds by motor vehicle or rail freight. The fiber drum must to be fabricated with a three ply wall, as a minimum. The coal tar pitch compound must be in a solid mass during transportation.</li> </ul>
	T1 - 1.5 178.274(d)(2) Normal
DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail (49	<ul> <li>155</li> <li>213</li> <li>240</li> <li>No limit</li> </ul>
CFR 173.27)	

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DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No limit		
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.		
TDG	1010077		
UN-No. (TDG)	: UN3077		
TDG Special Provisions	16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4, Dangerous Goods Safety Marks. 2) subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; b) UN1551, MEDICINE, LIQUID, TOXIC, N.O.S; c) UN3140, ALKALOID SALTS, LIQUID, N.O.S; or e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act",99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 kg of UN307		
Explosive Limit and Limited Quantity Index	: 5 kg		
Excepted quantities (TDG)	: E1		
Emergency Response Guide (ERG) Number	: 171		
IMDG	. 274 225 055 057 050		
Special provision (IMDG)	: 274, 335, 966, 967, 969		
Limited quantities (IMDG)	: 5 kg		
Excepted quantities (IMDG)	: E1		
Packing instructions (IMDG)	: LP02, P002		
Packing provisions (IMDG)	: PP12		
IBC packing instructions (IMDG)	: IBC08		
IBC special provisions (IMDG)	: B3		
Tank instructions (IMDG)	: BK1, BK2, BK3, T1		
Tank special provisions (IMDG)	: TP33		
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE		
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS		
Stowage category (IMDG)	: A		
Stowage and handling (IMDG)	: SW23		
IATA PCA Excepted quantities (IATA)	: E1		
PCA Limited quantities (IATA)	: Y956		
PCA limited quantity max net quantity (IATA)	: 30kgG		
PCA packing instructions (IATA)	. SUKYG : 956		
PCA max net quantity (IATA)	. 990 : 400kg		
CAO packing instructions (IATA)	: 400kg : 956		
ono paoning instructions (IATA)			

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CAO max net quantity (IATA)	400kg
Special provision (IATA)	A97, A158, A179, A197, A215
ERG code (IATA)	9L

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

#### Not applicable

### **SECTION 15: Regulatory information**

#### **15.1. US Federal regulations**

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
N,N-Dimethylperfluorooctanesulfonamide CAS-No. 213181-78-3 100%		
15.2. International regulations		
CANADA		
No additional information available		

### **EU-Regulations**

No additional information available

#### **National regulations**

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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

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Full text of H-phrases	
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation

NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.	
NFPA fire hazard	<ul> <li>O - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.</li> </ul>	3 0
NFPA reactivity	<ul> <li>O - Material that in themselves are normally stable, even under fire conditions.</li> </ul>	

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#### Hazard Rating

Health

Physical

Flammability

- : 3 Serious Hazard Major injury likely unless prompt action is taken and medical treatment is given
- : 0 Minimal Hazard Materials that will not burn
- : 0 Minimal Hazard Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Safety Data Sheet (SDS), USA