

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations SDS ID: 4122308 Issue date: 16.01.2017 Revision date: 18.12.2023 Version: 1.1

# **SECTION 1: Identification**

1.1. Identification	
Product form Substance name CAS-No. Product code Formula Synonyms Other means of identification <b>1.2. Recommended use and restrictions on</b>	<ul> <li>Substance</li> <li>Perfluoro-n-octanoic acid, ammonium salt</li> <li>3825-26-1</li> <li>4122-3-08</li> <li>C8H4F15NO2</li> <li>Ammonium perfluoro-n-octanoate</li> <li>MFCD00042599</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

Full text of H statements : see section 16

# **GHS US classification**

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation) Category 3	H331	Toxic if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Carcinogenicity Category 2	H351	Suspected of causing cancer
Reproductive toxicity, Additional category, Effects on or via lactation	H362	May cause harm to breast-fed children
Reproductive toxicity Category 1B	H360	May damage fertility or the unborn child
Specific target organ toxicity – Single exposure, Category 3,	H335	May cause respiratory irritation
Respiratory tract irritation		
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated
		exposure

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### 2.2. GHS Label elements, including precautionary statements

### **GHS US labeling**

Hazard pictograms (GHS US)



# 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

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Name	Product identifier	%	<b>GHS US classification</b>
Perfluoro-n-octanoic acid, ammonium salt (Main constituent)	CAS-No.: 3825-26-1	≤ 100	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 2, H351 Lact., H362 Repr. 1B, H360 STOT SE 3, H335 STOT RE 1, H372

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.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get immediate 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 immediate 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 immediate medical advice/attention.
4.2. Most important symptoms and ef	fects (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 r	nedia
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 chemic	al
Fire hazard :	Thermal decomposition generates: Carbon oxides. Hydrogen fluoride. Nitrogen oxides.
5.3. Special protective equipment and precau	itions for fire-fighters
	In case of fire: Evacuate area. Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

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SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment 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			

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
For containment Methods for cleaning up Other information	<ul> <li>Stop leak if safe to do so.</li> <li>Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust.</li> <li>For disposal of solid materials or residues refer to section 13: "Disposal considerations".</li> </ul>	

# 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	g 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. Hygroscopic. Keep contents under inert gas.</li> <li>Refer to Section 10 on Incompatible Materials.</li> <li>Store in dry, cool, well-ventilated area.</li> </ul>

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

# 8.1. Control parameters

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Ammonium perfluorooctanoate	
ACGIH OEL TWA	0,01 mg/m <sup>3</sup>	
Remark (ACGIH)	Skin; A3 431.00 Liver dam	
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans	

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# 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/Personal 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

### **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
pH	•	No data available
•		163 – 165 °C
Melting point	•	
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	:	431,1 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
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# 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

**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 (dermal) :	Harmful if swallowed. Not classified Toxic if inhaled.
Perfluoro-n-octanoic acid, ammonium salt (3	825-26-1)
LD50 oral rat	540 mg/kg
LD50 dermal rabbit	4300 mg/kg
LC50 Inhalation - Rat	980 mg/m <sup>3</sup> (Exposure time: 4 h)
ATE US (oral)	540 mg/kg body weight
ATE US (dermal)	4300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0,5 mg/l/4h
Skin corrosion/irritation :	Causes skin irritation.
Serious eye damage/irritation :	Causes serious eye damage.
Respiratory or skin sensitization :	Not classified
Germ cell mutagenicity :	Not classified
Carcinogenicity :	Suspected of causing cancer.
Reproductive toxicity :	May cause harm to breast-fed children. May damage fertility or the unborn child.
STOT-single exposure :	May cause respiratory irritation.

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STOT-repeated exposure :	Causes damage to organs through prolonged or repeated exposure.
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	
Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)	
Persistence and degradability	Not readily biodegradable. May cause long-term adverse effects in the environment. PBT - Persistent, Bioaccumulative and Toxic.
12.3. Bioaccumulative potential	

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)	
	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 Sewage disposal recommendations Product/Packaging disposal recommendations Additional information	<ul> <li>Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.</li> <li>See the EPA's Interim Guidance on PFAS Destruction and Disposal.</li> <li>Dispose of contents/container in accordance with licensed collector's sorting instructions.</li> <li>Recycle the material as far as possible.</li> </ul>
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	: UN2811
UN-No. (TDG)	: Not applicable
UN-No. (IMDG)	: 2811
UN-No. (IATA)	: 2811

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<b>14.2. UN proper shipping name</b> Proper Shipping Name (DOT) Proper Shipping Name (TDG)	: Toxic solids, organic, n.o.s. : Not applicable
Proper Shipping Name (IMDG) Proper Shipping Name (IATA)	<ul> <li>TOXIC SOLID, ORGANIC, N.O.S.</li> <li>Toxic solid, organic, n.o.s.</li> </ul>
14.3. Transport hazard class(es)	
DOT Transport hazard class(es) (DOT) Hazard labels (DOT)	: 6.1 : 6.1
TDG Transport hazard class(es) (TDG)	: Not applicable
IMDG Transport hazard class(es) (IMDG) Hazard labels (IMDG)	: 6.1 : 6.1
IATA Transport hazard class(es) (IATA) Hazard labels (IATA)	: 6.1 : 6.1
14.4. Packing group	
Packing group (DOT) Packing group (TDG) Packing group (IMDG) Packing group (IATA)	: III : Not applicable : III : III
14.5. Environmental hazards	
Other information	: No supplementary information available.
14.6. Special precautions for user	
DOT UN-No.(DOT)	: UN2811

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DOT Special Provisions (49 CFR 172.102)	<ul> <li>IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ<sup>-</sup> and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).</li> <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>T1 - 1.5 178.274(d)(2) Normal 178.275(d)(2)</li> <li>TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group II or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in</li> </ul>
	accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx)	: 213 : 240
CFR 173.27)	
DOT Quantity Limitations Cargo aircraft only (49	: 200 kg
CFR 175.75)	
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 No data available	
IMDG	
Special provision (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG) Packing instructions (IMDG)	: E1 : P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) Stowage category (IMDG)	: S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES : A
IATA PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y645
PCA limited quantity max net quantity (IATA)	: 10kg
PCA packing instructions (IATA)	: 670
PCA max net quantity (IATA)	: 100kg
CAO packing instructions (IATA)	: 677
CAO max net quantity (IATA)	: 200kg
Special provision (IATA) ERG code (IATA)	: A3, A5 : 6L

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

# Not applicable

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# **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

**15.2. International regulations** 

## CANADA

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)

Listed on the Canadian DSL (Domestic Substances List)

### **EU-Regulations**

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# National regulations

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIOC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

# **15.3. US State regulations**

Perfluoro-n-octanoic acid, ammonium salt (3825-26-1)	
State or local regulations	U.S Massachusetts - Right To Know List U.S New Jersey - Right to Know Hazardous Substance List

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	Full text of H-phrases	
H302	Harmful if swallowed	
H315	Causes skin irritation	
H318	Causes serious eye damage	
H331	Toxic if inhaled	
H335	May cause respiratory irritation	
H351	Suspected of causing cancer	
H360	May damage fertility or the unborn child	

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Full text of H-phrases		
H362	May cause harm to breast-fed children	
H372	Causes damage to organs through prolonged or repeated exposure	
NFPA health hazar		
NFPA fire hazard	<ul> <li>0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.</li> </ul>	
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
Hazard Rating		
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given	
Flammability	: * - Chronic (long-term) health effects may result from repeated overexposure : 0 Minimal Hazard - Materials that will not burn	
Physical	<ul> <li>O Minimal Hazard - Materials that will not burn</li> <li>O 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.</li> </ul>	
Safety Data Sheet		

Safety Data Sheet (SDS), USA