

## SAFETY DATA SHEET

### **SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

#### 1.1 - Product Identifiers

Catalog Name: ISO21675-PFAS-R1

Description: Native PFAS Reference Standard

#### 1.2 - Relevant Identified Uses of the Substance or Mixture

Laboratory Chemical Reference Material

#### 1.3 - Supplier Details

Company: AccuStandard, Inc.  
125 Market St.  
New Haven, CT 06513 USA

Telephone Number: 203-786-5290

Fax: 203-786-5287

Email: edocs@accustandard.com

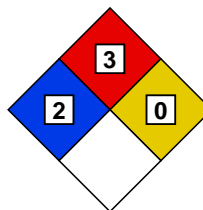
#### 1.4 - Emergency Telephone Number

Emergency Phone #: AccuStandard, Inc.  
1-203-502-7070 (USA)  
+001-203-502-7070 (International)

24 hours / 7 days a week

### **SECTION 2 - HAZARDS IDENTIFICATION**

#### 2.1 - GHS Label Elements



*	2	HEALTH
3	FLAMMABILITY	
0	PHYSICAL HAZARD	

**Signal Word: Danger**

#### **Hazard Codes:**

H225 - Highly Flammable (Flammable liquids, category 2)

H301 - Toxic if swallowed. (Acute toxicity, oral, category 3)

H311 - Toxic if absorbed through skin. (Acute toxicity, dermal, category 3)

H315 - Irritating to skin. (Skin corrosion/irritation, category 2)

H320 - Irritating to eyes. (Eye damage/irritation, category 2B)

H332 - Harmful if inhaled. (Acute toxicity, inhalation, category 4)

H336 - Overexposure may cause dizziness, nausea, muscle weakness, narcosis and respiratory failure.

H360 - California Proposition 65 Warning: This product contains a component (or components) that may cause birth defects or other reproductive harm in a quantity greater than or equal to 0.1%.

H370 - Causes damage to organs. (Specific target organ toxicity, single exposure, category 1)

#### **Precautionary Codes:**

**SECTION 2 - HAZARDS IDENTIFICATION** - continued**2.1 - GHS Label Elements** - continued

P202 - This product should only be used by persons trained in the safe handling of hazardous chemicals.

P233 - Store in a tightly closed container. (P404)

P262 - Do not get in eyes, on skin or clothing.

P264 - Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

P280 - Protective gloves must be worn to prevent skin contact.

P284 - Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), or a risk assessment shows air-purifying respirators are appropriate, use of a NIOSH/MSHA approved air supplied respirator is advised. Use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges in absence of proper environmental control. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Engineering and/or administrative controls should be implemented to reduce exposure.

P331 - Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

P338 - Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

P360 - Skin contact: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**2.2 - Other Hazards****2.2.1 - Symptom of Exposure Health/Environment**

Highly Flammable (Flammable liquids, category 2)

Causes damage to organs. (Specific target organ toxicity, single exposure, category 1)

After ingestion or inhalation, initial symptoms may be only that of mild intoxication, but may become severe after 12 or 18 hours.

POISON: May be fatal or cause blindness if swallowed.

Overexposure may cause dizziness, nausea, muscle weakness, narcosis and respiratory failure.

**2.2.2 - Potential Health Effects**

Irritating to eyes. (Eye damage/irritation, category 2B)

Irritating to skin. (Skin corrosion/irritation, category 2)

Toxic if absorbed through skin. (Acute toxicity, dermal, category 3)

Irritating to mucous membrane and upper respiratory system.

Harmful if inhaled. (Acute toxicity, inhalation, category 4)

Toxic if swallowed. (Acute toxicity, oral, category 3)

**2.2.3 - Routes of Entry**

Inhalation, ingestion or skin contact.

**2.2.4 - Carcinogenicity**

Contains one or more components that are classified (ACGIH, IARC, NTP, OSHA) as a suspected cancer hazard in quantities less than 0.1%.

California Proposition 65 Warning: This product contains a component (or components) that may cause birth defects or other reproductive harm in a quantity greater than or equal to 0.1%.

**SECTION 3 - COMPOSITION / ANALYTES DATA**

Description: Native PFAS Reference Standard

**SECTION 3 - COMPOSITION / ANALYTES DATA** - continued

Analyte	CAS #	% Concentration	ACGIH -TLV (mg/m <sup>3</sup> )			OSHA -PEL (mg/m <sup>3</sup> )		
			TWA	STEL	Skin	TWA	STEL	Skin
Perfluoro-n-butanoic acid	375-22-4	<0.001						
Perfluoro-n-pentanoic acid	2706-90-3	<0.001						
Perfluoro-n-hexanoic acid	307-24-4	<0.001						
Perfluoro-n-heptanoic acid	375-85-9	<0.001						
Perfluoro-n-octanoic acid	335-67-1	<0.001						
Perfluoro-n-nonanoic acid	375-95-1	<0.001						
Perfluoro-n-decanoic acid	335-76-2	<0.001						
Perfluoro-n-undecanoic acid	2058-94-8	<0.001						
Perfluoro-n-dodecanoic acid	307-55-1	<0.001						
Perfluoro-n-tridecanoic acid	72629-94-8	<0.001						
Perfluoro-n-tetradecanoic acid	376-06-7	<0.001						
Perfluorohexadecanoic acid	67905-19-5	<0.001						
Perfluorooctane sulfonamide	754-91-6	<0.001						
N-Methylperfluoro-1-octanesulfonamide	31506-32-8	<0.001						
Sulfluramid	4151-50-2	<0.001						
N-methylperfluoro-1-octanesulfonamidoacetic acid	2355-31-9	<0.001						
N-ethylperfluoro-1-octanesulfonamidoacetic acid	2991-50-6	<0.001						
2H-Perfluoro-2-decenoic Acid	70887-84-2	<0.001						
Perfluoro(2-methyl-3-oxahexanoic) acid	13252-13-6	<0.001						
Perfluorobutane-1-sulfonic acid	375-73-5	<0.001						
Perfluorohexane-1-sulfonic acid	355-46-4	<0.001						
Perfluoroheptanesulfonic acid	375-92-8	<0.001						
Perfluorooctane-1-sulfonic acid	1763-23-1	<0.001						
Perfluorodecane-1-sulfonic acid	335-77-3	<0.001						
1H,1H,2H,2H-Perfluorooctane sulfonic acid	27619-97-2	<0.001						

**SECTION 3 - COMPOSITION / ANALYTES DATA** - continued

Analyte	CAS #	% Concentration	ACGIH -TLV (mg/m <sup>3</sup> )			OSHA -PEL (mg/m <sup>3</sup> )		
			TWA	STEL	Skin	TWA	STEL	Skin
1H,1H,2H,2H-Perfluorodecanesulfonic acid	39108-34-4	<0.001						
Sodium dodecafluoro-3H-4,8-dioxanonanoate	2250081-67-3	<0.001						
Potassium 9-chlorohexadecafluoro-3-oxanone-1-sulfonate	73606-19-6	<0.001						
Bis[2-(perfluorooctyl)ethyl] phosphate	678-41-1	<0.001						
Methanol	67-56-1	>99.999				260		

**SECTION 4 - FIRST AID MEASURES**4.1 - First Aid Procedures - General

Get medical assistance for all cases of overexposure.

4.2 - Eye Contact

Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. (P338)

4.3 - Skin Contact

Skin contact: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse. (P360)

4.4 - Inhalation

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

4.5 - Ingestion

Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. (P331)

**SECTION 5 - FIRE FIGHTING MEASURES**5.1 - Flammable Properties

Dangerous fire and explosive hazard.

Containers can build up pressure if exposed to heat.

Vapors can travel to a source of ignition and flash back.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

5.2 - Extinguishing Media

Use alcohol foam, carbon dioxide, dry chemical, or water spray when fighting fires involving this material.

5.3 - Protection of Firefighters

As in any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES****6.1 - Spill Response**

Wear suitable protective equipment listed under Exposure Controls / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Dispose as hazardous waste. Comply with Federal, State and local regulations.

**SECTION 7 - HANDLING AND STORAGE**

Store in a tightly closed container. (P404)

Store in a cool place below 14 °F (-10 °C).

Avoid breathing vapors or mists.

Use with adequate ventilation.

Do not get in eyes, on skin or clothing. (P262)

Avoid prolonged or repeated exposure.

This product should only be used by persons trained in the safe handling of hazardous chemicals. (P202)

**SECTION 8 - EXPOSURE CONTROLS****8.1 - Engineering Controls/PPE**

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available. (P264)

**8.2 - General Hygiene Considerations**

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), or a risk assessment shows air-purifying respirators are appropriate, use of a NIOSH/MSHA approved air supplied respirator is advised. Use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges in absence of proper environmental control. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Engineering and/or administrative controls should be implemented to reduce exposure.

Material should be handled or transferred in an approved fume hood or with adequate ventilation.

Protective gloves must be worn to prevent skin contact. (P280)

(Chloroprene, natural rubber, nitrile, or equivalent)

Use eye protection tested and approved under the appropriate government standards such as NIOSH (US) or EN 166 (EU).

All recommendations are advisory only and must be evaluated by an industrial hygienist and/or safety officer familiar with the specific situation of anticipated use, such as concentration and amount of the substance in the workplace. Any recommendation should not be construed as offering an approval for any specific use of the product.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Clear liquid

Odor: N/A

Odor Threshold: N/A

pH: N/A

Melting Point: -93.9 °C

Boiling Point: 65 °C

Flash Point: 52 °F (11 °C) (tcc)

Evaporation Rate (Butyl Acetate=1): 5.9

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES** - continued

Flammability Class: N/A  
Lower Flammability Level: 6.7  
Upper Flammability Level: 36.5  
Vapor Pressure: 97 mmHg (20 °C)  
Vapor Density (Air = 1): 1.1 g/L  
Specific Gravity: 0.791 g/cm<sup>3</sup>  
Solubility in Water: Very soluble  
Partition Coefficient: log Pow: -0.77  
Autoignition Temperature: 385 °C  
Decomposition Temperature: N/A  
Viscosity: N/A  
VOC Content: N/A  
Percent Volatile: 99.9+

**SECTION 10 - STABILITY AND REACTIVITY**

Stability: Stable  
Materials to Avoid: Acids  
Oxidizers  
Hazardous Decomposition: Oxides of carbon; Formaldehyde  
Hazardous Polymerization: Will not occur  
Condition to Avoid: Heat; Contact with ignition sources

**SECTION 11 - TOXICOLOGICAL INFORMATION****Human Health Toxicity**

See section 2 for specific toxicological information for the ingredients of this product.

LD50 (Oral): Human - 143 mg/kg; Rat - 1500 mg/kg

LD50 (Dermal) : Rabbit - >2000 mg/kg

LC50 (Inhalation): Rat - >20 mg/L

WARNING: This product contains chemicals known to the state of California to cause birth defects or other reproductive harm.

No other information related to the toxicological properties of this product is available at this time.

**SECTION 12 - ECOLOGICAL INFORMATION****Environmental Toxicity**

By complying with sections 6 and 7 there should be no release to the environment.

LC50 (Fish): >1000 mg/L 96H

EC50 (Aquatic Invertebrate): >1000 mg/L 48H

BCF: 1.0

Hydrolyzes readily on contact with water. Readily biodegradable.

No other information related to the ecological properties of this product is available at this time.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Recycle or incinerate at any EPA approved facility or dispose in compliance with Federal, State and local regulations. Empty containers must be triple-rinsed prior to disposal.

**SECTION 14 - TRANSPORT INFORMATION**Transportation Information (DOT/IATA)

UN Number: UN1230

Class: 3

Packing Group: II

Proper Shipping Name: Methanol

Poison by Inhalation: No

Marine Pollutant: No

**SECTION 15 - REGULATORY INFORMATION**

**WARNING:** This product contains chemicals known to the state of California to cause birth defects or other reproductive harm.

Not all components are listed on the TSCA Inventory.

This product contains a compound or compounds subject to EU Regulation (EC) No 1907/2006 (REACH) on Annex XIV, Annex XVII, and/or Article 59. Refer to the below table for details.

This product is subject to SARA section 313 reporting requirements.

**For laboratory, research and development use only. Not for manufacturing or commercial purposes.**

In addition to federal and state regulations, local regulations may apply. Check with your local regulatory authorities.

Analyte	CAS #	% Concentration	REACH (1907/2006)		
			Annex XIV	Annex XVII	Article 59
Perfluoro-n-octanoic acid	335-67-1	<0.001		X	X
Perfluoro-n-nonanoic acid	375-95-1	<0.001		X	X
Perfluoro-n-decanoic acid	335-76-2	<0.001		X	X
Perfluoro-n-undecanoic acid	2058-94-8	<0.001		X	X
Perfluoro-n-dodecanoic acid	307-55-1	<0.001		X	X
Perfluoro-n-tridecanoic acid	72629-94-8	<0.001		X	X
Perfluoro-n-tetradecanoic acid	376-06-7	<0.001		X	X
Perfluoro(2-methyl-3-oxa hexanoic) acid	13252-13-6	<0.001			X
Perfluorobutane-1-sulfonic acid	375-73-5	<0.001			X
Perfluorohexane-1-sulfonic acid	355-46-4	<0.001			X
Methanol	67-56-1	>99.999		X	

**SECTION 16 - OTHER INFORMATION**

This document has been designed to meet the requirements of OSHA, ANSI, GHS and CHIPs regulations. Chemicals are classified using the Globally Harmonized System for Classification and Labeling of Chemicals and CLP Regulation (EC) No. 1272/2008.

The statements contained herein are offered for informational purposes only and are based on technical data that we believe to be accurate. The manufacturer will not assume any liability for the accuracy and completeness of this information. Final determination of the suitability of the material is the responsibility of the user. Although certain hazards are described herein, the user should not presume that these are the only hazards that exist. Since conditions and manner of use are outside of the manufacturers control, we make

**NO WARRANTY OF MERCHANTABILITY, EXPRESSED OR IMPLIED, AND ASSUME NO LIABILITY RESULTING FROM ITS USE.**

Legend : N/A = Not Available    ND = Not Determined    NR = Not Regulated

Alteration of any information contained herein without written permission from the manufacturer is strictly prohibited.

**HMIS/NFPA HAZARD INDEX**

- 0 - Minimal
- 1 - Slight
- 2 - Moderate
- 3 - Serious
- 4 - Severe

\* - Additional Hazard

**GHS HAZARD INDEX**

- Category 1 - Most Severe
- Category 5 - Least Severe

\*\*\*\* End of Document \*\*\*\*