



METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 14/12/2020

Revision date:

Version: 1.0

ES-5643

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name : METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)
Product code : ES-5643

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Acute Tox. 3 (Inhalation:vapour)	H331
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 1	H370

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

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11
T; R39/23/24/25
Xi; R36/38

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Acute Tox. 3 (Inhalation:vapour)	H331
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
STOT SE 1	H370

Full text of H statements : see section 16

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Adverse physicochemical, human health and environmental effects

Eyes, Kidney, Liver, Heart, Central nervous system. Highly flammable liquid and vapor. Causes damage to organs (eyes, kidneys, liver, heart, central nervous system) (if inhaled, if swallowed, in contact with skin). Toxic in contact with skin. Toxic if inhaled. Toxic if swallowed. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapor
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H370 - Causes damage to organs (eyes, heart, kidneys, liver, central nervous system) (in contact with skin, if inhaled, if swallowed)

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P260 - Do not breathe dust, mist, vapors, fume, gas, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapor
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H370 - Causes damage to organs (eyes, kidneys, liver, heart, central nervous system) (Dermal, Inhalation, oral)

Precautionary statements (GHS-US)

: P210 - Keep away from heat, open flames, sparks. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust, fume, mist, gas, spray, vapors.
P261 - Avoid breathing dust, fume, gas, spray, vapors, mist.
P264 - Wash hands, forearms and face 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 clothing, protective gloves.
P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER
P302+P352 - If on skin: Wash with plenty of water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
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
P307+P311 - If exposed: Call a poison center/doctor

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P311 - Call a doctor, a POISON CENTER
P312 - Call a doctor, a POISON CENTER if you feel unwell
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)
P322 - Specific treatment (see Hazard pictograms (CLP) 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.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO₂), dry extinguishing powder to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

PBT: not relevant – no registration required

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
100% METHANOL UNLABELED	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X (REACH-no) 01-2119433307-44	98.01232	F; R11 T; R39/23/24/25 Xi; R36/38
ISOPROPANOL UNLABELED	(CAS-No.) 67-63-0 (Unlabeled) (EC-No.) 200-661-7 (Unlabeled) (EC Index-No.) 603-117-00-0 (Unlabeled)	1.98425	F; R11 Xi; R36 R67
SODIUM HYDROXIDE UNLABELED	(CAS-No.) 1310-73-2 (Unlabeled) (EC-No.) 215-185-5 (Unlabeled) (EC Index-No.) 011-002-00-6 (Unlabeled)	0.00092	C; R35 Xi; R41 R52
1H,1H,2H,2H-PERFLUOROHXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-93-8 (Unlabeled) (EC Index-No.)	0.00014	Xn; R22 C; R35
PERFLUOROHXANOIC ACID, SODIUM SALT (13C6, 99%)	(CAS-No.) 307-24-4 (Unlabeled) (EC-No.) 206-196-6 (Unlabeled)	0.00014	C; R35 R67 Xi; R41
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%)	(CAS-No.) 3871-99-6 (Unlabeled) (EC-No.) 223-393-2 (Unlabeled) (EC Index-No.)	0.00014	Xi; R36/37/38
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%)	(CAS-No.) 29420-49-3 (Unlabeled) (EC-No.) 249-61-3 (Unlabeled)	0.00014	Xi; R36/37/38
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%)	(CAS-No.) 2218-54-4 (Unlabeled) (EC Index-No.)	0.00014	Xi; R36/37/38
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%)	(CAS-No.) 2706-89-0 (Unlabeled) (EC Index-No.)	0.00014	Xi; R36/37/38
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-96-1 (Unlabeled) (EC Index-No.)	0.00013	T; R25 Xn; R20 N; R51/53
1H,1H,2H,2H-PERFLUOROCTANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-94-9 (Unlabeled) (EC Index-No.)	0.00013	Xn; R22 C; R35
PERFLUOROCTANESULFONAMIDE (PFOSA) (13C8, 99%)	(CAS-No.) 754-91-6 (Unlabeled) (EC-No.) 212-046-0 (Unlabeled) (EC Index-No.)	0.00013	R53
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%)	(CAS-No.) 4021-47-0 (Unlabeled)	0.00013	T; R23/25 Xn; R22 C; R34
N-ETHYLPERFLUOROCTANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%)	(CAS-No.) 2991-50-6 (Unlabeled)	0.00013	Xi; R36/37/38
N-METHYLPERFLUOROCTANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%)	(CAS-No.) 2355-31-9 (Unlabeled) (EC Index-No.)	0.00013	Xi; R36/37/38

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP substance listed as REACH Candidate (Henicosafuoroundecanoic acid)	(CAS-No.) 60871-96-7 (Unlabeled) (EC-No.) 218-165-4	0.00013	Xn; R20/21/22 Xi; R36/38
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%)	(CAS-No.) 1350614-84-4 (EC-No.) 206-397-9 (Unlabeled)	0.00013	Carc. Cat. 3; R40 Repr. Cat. 1; R60 Repr. Cat. 1; R61 Repr. Cat. 3; R62 Repr. Cat. 3; R63 Xn; R20/22 Xi; R41 R48
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY	(CAS-No.) 375-95-1 (Unlabeled) (EC-No.) 206-801-3 (Unlabeled)	0.00013	Xi; R36/37/38
PERFLUORODECANOIC ACID (13C9, 99%)	(CAS-No.) 335-76-2 (Unlabeled) (EC-No.) 206-400-3 (Unlabeled)	0.00013	T; R25 Xi; R36/37/38
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%)	(CAS-No.) 307-67-5 (Unlabeled) (EC-No.) 206-203-2 (Unlabeled)	0.00013	Xi; R36/37/38
PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%)	(CAS-No.) 20109-59-5 (Unlabeled)	0.00013	Xi; R36/37/38
PERFLUOROTETRADECANOIC ACID (13C2, 99%) substance listed as REACH Candidate (Heptacosafuorotetradecanoic acid)	(CAS-No.) 376-06-7 (EC-No.) 206-803-4 (EC Index-No.)	0.00013	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
100% METHANOL UNLABELED	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X (REACH-no) 01-2119433307-44	98.01232	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 1, H370
ISOPROPANOL UNLABELED	(CAS-No.) 67-63-0 (Unlabeled) (EC-No.) 200-661-7 (Unlabeled) (EC Index-No.) 603-117-00-0 (Unlabeled)	1.98425	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
SODIUM HYDROXIDE UNLABELED	(CAS-No.) 1310-73-2 (Unlabeled) (EC-No.) 215-185-5 (Unlabeled) (EC Index-No.) 011-002-00-6 (Unlabeled)	0.00092	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-93-8 (Unlabeled) (EC Index-No.)	0.00014	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%)	(CAS-No.) 307-24-4 (Unlabeled) (EC-No.) 206-196-6 (Unlabeled)	0.00014	Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H336
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%)	(CAS-No.) 3871-99-6 (Unlabeled) (EC-No.) 223-393-2 (Unlabeled) (EC Index-No.)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%)	(CAS-No.) 29420-49-3 (Unlabeled) (EC-No.) 249-61-3 (Unlabeled)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%)	(CAS-No.) 2218-54-4 (Unlabeled) (EC Index-No.)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%)	(CAS-No.) 2706-89-0 (Unlabeled) (EC Index-No.)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-96-1 (Unlabeled) (EC Index-No.)	0.00013	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Aquatic Chronic 2, H411
1H,1H,2H,2H-PERFLUOROOCCTANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-94-9 (Unlabeled) (EC Index-No.)	0.00013	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
PERFLUOROOCCTANESULFONAMIDE (PFOSA) (13C8, 99%)	(CAS-No.) 754-91-6 (Unlabeled) (EC-No.) 212-046-0 (Unlabeled) (EC Index-No.)	0.00013	Aquatic Chronic 4, H413
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%)	(CAS-No.) 4021-47-0 (Unlabeled)	0.00013	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
N-ETHYLPERFLUOROOCCTANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%)	(CAS-No.) 2991-50-6 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

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N-METHYLPERFLUOROOCETANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%)	(CAS-No.) 2355-31-9 (Unlabeled) (EC Index-No.)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP substance listed as REACH Candidate (Henicosafuoroundecanoic acid)	(CAS-No.) 60871-96-7 (Unlabeled) (EC-No.) 218-165-4	0.00013	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%)	(CAS-No.) 1350614-84-4 (EC-No.) 206-397-9 (Unlabeled)	0.00013	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Carc. 2, H351 Lact., H362 Repr. 1A, H360 STOT RE 1, H372
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY	(CAS-No.) 375-95-1 (Unlabeled) (EC-No.) 206-801-3 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336
PERFLUORODECANOIC ACID (13C9, 99%)	(CAS-No.) 335-76-2 (Unlabeled) (EC-No.) 206-400-3 (Unlabeled)	0.00013	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%)	(CAS-No.) 307-67-5 (Unlabeled) (EC-No.) 206-203-2 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)
PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%)	(CAS-No.) 20109-59-5 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROTETRADECANOIC ACID (13C2, 99%) substance listed as REACH Candidate (Heptacosafuorotetradecanoic acid)	(CAS-No.) 376-06-7 (EC-No.) 206-803-4 (EC Index-No.)	0.00013	Not classified

Name	Product identifier	%	GHS-US classification
100% METHANOL UNLABELED	(CAS-No.) 67-56-1	98.01232	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 1, H370
ISOPROPANOL UNLABELED	(CAS-No.) 67-63-0 (Unlabeled)	1.98425	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
SODIUM HYDROXIDE UNLABELED	(CAS-No.) 1310-73-2 (Unlabeled)	0.00092	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-93-8 (Unlabeled)	0.00014	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%)	(CAS-No.) 307-24-4 (Unlabeled)	0.00014	Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H336
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%)	(CAS-No.) 3871-99-6 (Unlabeled)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%)	(CAS-No.) 29420-49-3 (Unlabeled)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%)	(CAS-No.) 2218-54-4 (Unlabeled)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%)	(CAS-No.) 2706-89-0 (Unlabeled)	0.00014	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-96-1 (Unlabeled)	0.00013	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 2, H411
1H,1H,2H,2H-PERFLUOROOCETANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%)	(CAS-No.) 27619-94-9 (Unlabeled)	0.00013	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
PERFLUOROOCETANESULFONAMIDE (PFOSA) (13C8, 99%)	(CAS-No.) 754-91-6 (Unlabeled)	0.00013	Aquatic Chronic 4, H413

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Name	Product identifier	%	GHS-US classification
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%)	(CAS-No.) 4021-47-0 (Unlabeled)	0.00013	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Aquatic Acute 2, H401
N-ETHYLPERFLUOROOCTANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%)	(CAS-No.) 2991-50-6 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
N-METHYLPERFLUOROOCTANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%)	(CAS-No.) 2355-31-9 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP	(CAS-No.) 60871-96-7 (Unlabeled)	0.00013	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%)	(CAS-No.) 1350614-84-4	0.00013	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Carc. 2, H351 Lact., H362 Repr. 1A, H360 STOT RE 1, H372
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY	(CAS-No.) 375-95-1 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336
PERFLUORODECANOIC ACID (13C9, 99%)	(CAS-No.) 335-76-2 (Unlabeled)	0.00013	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%)	(CAS-No.) 307-67-5 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400
PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%)	(CAS-No.) 20109-59-5 (Unlabeled)	0.00013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
PERFLUOROTETRADECANOIC ACID (13C2, 99%)	(CAS-No.) 376-06-7	0.00013	Not classified

Full text of R- and H- phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand. Call a physician immediately. Evacuate danger area.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Call a doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Take immediately victim to hospital. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: 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. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Causes damage to organs (Eyes, heart, liver, kidneys, central nervous system, Skin) (in contact with skin, if inhaled, if swallowed).
Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Dry sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapor.
Reactivity : Vapors may form flammable mixture with air. Highly flammable liquid and vapor.

5.3. Advice for firefighters

- Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Wear recommended personal protective equipment.
Other information : Use water spray to cool exposed surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Wear respiratory protection. Do not breathe dust, mist, gas, spray, vapors, fume. Avoid contact with skin, eyes and clothing. Ventilate spillage area. Remove all sources of ignition. No open flames, no sparks, and no smoking. Ensure adequate air ventilation. Special attention should be given to low areas/pits where flammable vapors can accumulate.

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

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Dike and contain spill.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. This material and its container must be disposed of in a safe way, and as per local legislation.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust, fume, gas, spray, vapors, mist. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.
Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Headache. Nausea. Dizziness. Eye damage. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Danger of cutaneous absorption.

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USA NIOSH	NIOSH REL (TWA) (mg/m ³)	260 mg/m ³ Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	325 mg/m ³ Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm Basis: NIOSH Recommended Exposure Limits
USA NIOSH	Remark (NIOSH)	Potential for dermal absorption.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	260 mg/m ³ Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (STEL) (mg/m ³)	325 mg/m ³ Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (STEL) (ppm)	250 ppm Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (Ceiling) (ppm)	1000 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	Remark (OSHA)	The value in mg/m ³ is approximate. Skin notation.
100% METHANOL UNLABELED (67-56-1)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Headache. Nausea. Dizziness. Eye damage. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Danger of cutaneous absorption.
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	260 mg/m ³ Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	325 mg/m ³ Basis: NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm Basis: NIOSH Recommended Exposure Limits
USA NIOSH	Remark (NIOSH)	Potential for dermal absorption.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	260 mg/m ³ Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (STEL) (mg/m ³)	325 mg/m ³ Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)

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100% METHANOL UNLABELED (67-56-1)		
USA OSHA	OSHA PEL (STEL) (ppm)	250 ppm Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (Ceiling) (ppm)	1000 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	Remark (OSHA)	The value in mg/m3 is approximate. Skin notation.
SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))		
Italy - Portugal - USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³ Upper Respiratory Tract irritation. Eye irritation. Skin irritation.
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³ Upper Respiratory Tract irritation. Eye irritation. Skin irritation.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³ Upper Respiratory Tract irritation. Eye irritation. Skin irritation.
ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.0000000 ppm Remarks: Central Nervous System impairment, Upper Respiratory Tract irritation, Eye irritation, Substances for which there is a Biological Exposure Index or Indices see BEI® section), Not classifiable as a human carcinogen; USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	400 ppm Remarks: Central Nervous System impairment, Upper Respiratory Tract irritation, Eye irritation, Substances for which there is a Biological Exposure Index or Indices see BEI® section), Not classifiable as a human carcinogen; USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Component: 2-Propanol; CAS-No- 67-63-0; Parameters- Acetone; Value- 40.0000 mg/l; Biological specimen- Urine; Basis- ACGIH-Biological; Remarks: End of shift at end of workweek; Exposure Indices (BEI)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	980 USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (TWA) (ppm)	400 ppm USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	1225 mg/m ³ USA. NIOSH Recommended Exposure Limits
USA NIOSH	NIOSH REL (STEL) (ppm)	500 ppm USA. NIOSH Recommended Exposure Limits
USA OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³ The value in mg/m3 is approximate. USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
USA OSHA	OSHA PEL (TWA) (ppm)	400 USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
USA OSHA	OSHA PEL (STEL) (mg/m ³)	1225 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (STEL) (ppm)	500 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	980 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA OSHA	OSHA PEL (Ceiling) (ppm)	400 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)

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DNEL/DMEL (Workers)

Acute - systemic effects, dermal	40 mg/kg bodyweight/day
Acute - systemic effects, inhalation	260 mg/m ³
Acute - local effects, dermal	260 mg/cm ²
Long-term - systemic effects, dermal	40 mg/kg bodyweight/day
Long-term - local effects, dermal	260 mg/cm ²

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Long-term - local effects, inhalation	260 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	8 mg/kg body weight
Acute - systemic effects, inhalation	50 mg/m ³
Acute - systemic effects, oral	8 mg/kg body weight
Acute - local effects, inhalation	50 mg/m ³
Long-term - systemic effects,oral	8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50 mg/m ³
Long-term - systemic effects, dermal	8 mg/kg bodyweight/day
Long-term - local effects, inhalation	50 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	154 mg/l
PNEC aqua (marine water)	15.4 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	570.4 mg/kg dwt
PNEC (Soil)	
PNEC soil	23.5 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 mg/kg

8.2. Exposure controls

- Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



- Materials for protective clothing : Wear suitable protective clothing and gloves.
- Hand protection : Wear suitable protective clothing and gloves.
- Eye protection : Wear eye protection. Chemical goggles or face shield with safety glasses.
- Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

- Physical state : Liquid
- Appearance : Liquid
- Molecular mass : 32.04 g/mol
- Color : Colorless
- Odor : Pungent
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : -98 °C (-144 °F)
- Freezing point : No data available
- Boiling point : 64.7 °C (148.5 °F)
- Flash point : 9.7 °C (49.5 °F) - closed cup
- Auto-ignition temperature : 455 °C (851 °F) at 1,013 hPa (760 mmHg)
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : 130.3 hPa (97.7 mmHg) at 20 °C (68 °F); 169.27 hPa (126.96 mmHg) at 25 °C (77 °F)
- Vapor pressure at 50 °C : 546.6 hPa (410 mmHg) at 50 °C (122 °F)
- Relative vapor density at 20 °C : 1.11

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Relative density	: No data available
Specific gravity / density	: 0.791 g/ml at 25 °C (77 °F)
Solubility	: Water: Completely miscible
Log Pow	: -0.77
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidizing properties	: Non oxidizing material according to EC criteria.
Explosion limits	: 6 - 36 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form flammable mixture with air. Highly flammable liquid and vapor.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Acid anhydrides. Acid chlorides. Oxidizing agent. Alkali Metal Amides. Reducing agents. Acids.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation:vapour: Toxic if inhaled.

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)	
LD50 oral rat	1187 - 2769 mg/kg
LD50 dermal rabbit	17100 mg/kg
LC50 inhalation rat (mg/l)	128.2 mg/l/4h ; 87.6 mg/l - 6 h
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
ATE CLP (vapors)	3.000 mg/l/4h
ATE CLP (dust, mist)	128.200 mg/l/4h
LDLO, oral, human	143 mg/kg Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

100% METHANOL UNLABELED (67-56-1)	
LD50 oral rat	1187 - 2769 mg/kg
LD50 dermal rabbit	17100 mg/kg
LC50 inhalation rat (mg/l)	128.2 mg/l/4h ; 87.6 mg/l - 6 h
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
ATE CLP (vapors)	3.000 mg/l/4h
ATE CLP (dust, mist)	128.200 mg/l/4h
LDLO, oral, human	143 mg/kg Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-93-8 (Unlabeled))	
ATE CLP (oral)	500.000 mg/kg body weight

1H,1H,2H,2H-PERFLUOROCTANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-94-9 (Unlabeled))	
ATE CLP (oral)	500.000 mg/kg body weight

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1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-96-1 (Unlabeled))	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

PERFLUOROOCETANESULFONAMIDE (PFOSA) (13C8, 99%) (754-91-6 (Unlabeled))	
LD50 oral rat	> 172 mg/kg

SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%) (4021-47-0 (Unlabeled))	
ATE CLP (oral)	500.000 mg/kg body weight

PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%) (1350614-84-4)	
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
Additional information	LD50 Intraperitoneal - Rat - 189 mg/kg

PERFLUORODECANOIC ACID (13C9, 99%) (335-76-2 (Unlabeled))	
LD50 oral rat	57 mg/kg
ATE CLP (oral)	57.000 mg/kg body weight

PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP (60871-96-7 (Unlabeled))	
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (dust, mist)	1.500 mg/l/4h

ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))	
LD50 oral rat	5045 mg/kg Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general)
LD50 dermal rat	12800 mg/kg - Rabbit
LC50 inhalation rat (ppm)	16000 - 8 h
ATE CLP (oral)	5045.000 mg/kg body weight
ATE CLP (dermal)	12800.000 mg/kg body weight

Skin corrosion/irritation	: Skin - Rabbit. Result: No skin irritation
Serious eye damage/irritation	: Eyes - Rabbit. Result: No eye irritation
Respiratory or skin sensitization	: Maximisation Test . Guinea pig. Did not cause sensitization. (OECD 406 method)
Germ cell mutagenicity	: AMES test : S. typhimurium. Result: Negative. fibroblast. Result: Negative. Mutation in mammalian somatic cells. Mutagenicity (in vivo mammalian bone-marrow cystogenetic test, chromosomal analysis) - Mouse - Male and female Result: Negative. Mouse - Male and female. Result: Negative
Carcinogenicity	: Not classified
Reproductive toxicity	: Damage to fetus not classifiable. Fertility classification not possible from current data.
Specific target organ toxicity – single exposure	: Causes damage to organs through prolonged or repeated exposure
Specific target organ toxicity – repeated exposure	: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Effects due to Ingestion may include: Headache. Dizziness. Drowsiness. metabolic acidosis. Coma. May be fatal if swallowed and enters airways. If swallowed there is a risk of blindness. Effects on humans. stomach.
Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)	
LC50 fish 1	15400 mg/l mortality LC50 - Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	> 10000 mg/l Daphnia magna (Water flea) - 48 h
EC50 Daphnia 2	22000 mg/l Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 96 h
NOEC (acute)	7900 mg/l Oryzias latipes - 200 h
100% METHANOL UNLABELED (67-56-1)	
LC50 fish 1	15400 mg/l mortality LC50 - Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	> 10000 mg/l Daphnia magna (Water flea) - 48 h
EC50 Daphnia 2	22000 mg/l Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 96 h
NOEC (acute)	7900 mg/l Oryzias latipes - 200 h
SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))	
LC50 fish 1	125 mg/l Gambusia affinis (Mosquito fish) - 96 h
EC50 Daphnia 1	40.38 mg/l Daphnia (water flea) - 48 h - Immobilization
LC50 fish 2	45.4 mg/kg Oncorhynchus mykiss (rainbow trout) - 96 h
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%) (307-67-5 (Unlabeled))	
EC50 other aquatic organisms 1	0.0792 mg/l Daphnia magna (Water flea) - 48h
ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))	
LC50 fish 1	9640 mg/l - Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	5102 mg/l - Daphnia magna (Water flea) - 24 h
ErC50 (algae)	> 1000 mg/l - 24 h
ErC50 (other aquatic plants)	EC50 - > 2,000.00 mg/l - Desmodium subspicatus (green algae) - 72 h
Additional information	EC50 (Daphnia Magna) -invertebrates. :

12.2. Persistence and degradability

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)	
Biochemical oxygen demand (BOD)	600 - 1200 mg/g
Chemical oxygen demand (COD)	1420 mg/g
ThOD	1500 mg/g
Biodegradation	72 % - rapidly biodegradable aerobic - Exposure time 5 d
100% METHANOL UNLABELED (67-56-1)	
Biochemical oxygen demand (BOD)	600 - 1200 mg/g
Chemical oxygen demand (COD)	1420 mg/g
ThOD	1500 mg/g
Biodegradation	72 % - rapidly biodegradable aerobic - Exposure time 5 d
SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))	
Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) (307-24-4 (Unlabeled))	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)	
BCF fish 1	5 mg/l Cyprinus carpio (Carp) - 72 d at 20 °C
Bioconcentration factor (BCF REACH)	1
Log Pow	-0.77
100% METHANOL UNLABELED (67-56-1)	
BCF fish 1	5 mg/l Cyprinus carpio (Carp) - 72 d at 20 °C
Bioconcentration factor (BCF REACH)	1
Log Pow	-0.77
PERFLUOROOCETANESULFONAMIDE (PFOSA) (13C8, 99%) (754-91-6 (Unlabeled))	
Log Pow	5.8

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ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))	
Log Pow	0.05

12.4. Mobility in soil

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)	
Ecology - soil	Not degradable in the soil.

100% METHANOL UNLABELED (67-56-1)	
Ecology - soil	Not degradable in the soil.

12.5. Results of PBT and vPvB assessment

PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP (60871-96-7 (Unlabeled))	
This substance/mixture does not meet the PBT criteria of REACH, annex XIII	
This substance/mixture meets the vPvB criteria of REACH, annex XIII	

PERFLUOROTETRADECANOIC ACID (13C2, 99%) (376-06-7)	
This substance/mixture does not meet the PBT criteria of REACH, annex XIII	
This substance/mixture meets the vPvB criteria of REACH, annex XIII	

12.6. Other adverse effects

Other adverse effects	: Avoid release to the environment.
Other information	: Stability in water: at 19 °C - (83 - 91%) - 72 h. Remarks: Hydrolyses on contact with water. Hydrolyses readily.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No.(DOT)	: 1230
DOT NA no.	UN1230

14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Methanol
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid 6.1 - Poison



DOT Symbols	: + - Fixes (cannot be altered) proper shipping name, hazard class, and packing group, I - Proper shipping name appropriate for international and domestic transportation
Packing group (DOT)	: II - Medium Danger
DOT Special Provisions (49 CFR 172.102)	: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202

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DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT RQ : 5000 lbs
Marine pollutant : No

14.3. Additional information

Emergency Response Guide (ERG) Number : 131
Other information : No supplementary information available.

Overland transport

Packing group (ADR) : II
Class (ADR) : 3 - Flammable liquid
Hazard identification number (Kemler No.) : 336
Classification code (ADR) : FT1
Hazard labels (ADR) : 3 - Flammable liquids
6.1 - Toxic substances



Orange plates : 

Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"
MFAG-No : 131

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
Civil Aeronautics Law : Flammable liquids

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

14.6. 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

METHOD 8327 SURROGATE SPIKING MIXTURE IN METHANOL(W/4 MOLAR EQUIV. NAOH)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ : 5000 lb

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SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
100% METHANOL UNLABELED (67-56-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-93-8 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
1H,1H,2H,2H-PERFLUOROOCANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-94-9 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-96-1 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROOCANESULFONAMIDE (PFOSA) (13C8, 99%) (754-91-6 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
N-ETHYLPERFLUOROOCANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%) (2991-50-6 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
N-METHYLPERFLUOROOCANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%) (2355-31-9 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%) (4021-47-0 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%) (29420-49-3 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%) (3871-99-6 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

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POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%) (3871-99-6 (Unlabeled))	
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%) (2218-54-4 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%) (2706-89-0 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) (307-24-4 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%) (20109-59-5 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%) (1350614-84-4)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY (375-95-1 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
PERFLUORODECANOIC ACID (13C9, 99%) (335-76-2 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP (60871-96-7 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%) (307-67-5 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
PERFLUOROTETRADECANOIC ACID (13C2, 99%) (376-06-7)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313

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15.2. International regulations

CANADA

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Listed on the Canadian DSL (Domestic Substances List)

100% METHANOL UNLABELED (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

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U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

100% METHANOL UNLABELED (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-93-8 (Unlabeled))

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

1H,1H,2H,2H-PERFLUOROOCANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-94-9 (Unlabeled))

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-96-1 (Unlabeled))

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

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PERFLUOROOCETANESULFONAMIDE (PFOSA) (13C8, 99%) (754-91-6 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
N-ETHYLPERFLUOROOCETANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%) (2991-50-6 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
N-METHYLPERFLUOROOCETANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%) (2355-31-9 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%) (4021-47-0 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%) (29420-49-3 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%) (3871-99-6 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%) (2218-54-4 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%) (2706-89-0 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) (307-24-4 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%) (20109-59-5 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

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PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%) (20109-59-5 (Unlabeled))				
		Female	Male	
No	No	No	No	
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%) (1350614-84-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	Yes	Yes	
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY (375-95-1 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUORODECANOIC ACID (13C9, 99%) (335-76-2 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP (60871-96-7 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%) (307-67-5 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
PERFLUOROTETRADECANOIC ACID (13C2, 99%) (376-06-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
100% METHANOL UNLABELED (67-56-1)				
State or local regulations				
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances				
SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))				
State or local regulations				
U.S. - Massachusetts - Right To Know List				

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SODIUM HYDROXIDE UNLABELED (1310-73-2 (Unlabeled))
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-93-8 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
1H,1H,2H,2H-PERFLUOROOCETANE SULFONATE (6:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-94-9 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS), SODIUM SALT (1,2-13C2, 99%; 1,1,2,2-D4, 98%) (27619-96-1 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROOCETANESULFONAMIDE (PFOSA) (13C8, 99%) (754-91-6 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
N-ETHYLPERFLUOROOCETANESULFONAMIDOACETIC ACID (N-ETHYL-D5, 98%) (2991-50-6 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
N-METHYLPERFLUOROOCETANESULFONAMIDOACETIC ACID (N-METHYL-D3, 98%) (2355-31-9 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
SODIUM PERFLUORO-1-OCTANESULFONATE (PFOS) (13C8, 99%) (4021-47-0 (Unlabeled))
State or local regulations
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
PERFLUOROBUTANESULFONATE, POTASSIUM SALT (13C4, 99%) (29420-49-3 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
POTASSIUM PERFLUORO-1-HEXANESULFONATE (13C6, 99%) (3871-99-6 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROBUTYRIC ACID, SODIUM SALT (2,3,4-13C3, 99%) (2218-54-4 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROPENTANOIC ACID, SODIUM SALT (PENTANOYL-13C5, 99%) (2706-89-0 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) (307-24-4 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

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PERFLUOROHEPTANOIC ACID, SODIUM SALT (HEPTANOYL-13C7, 99%) (20109-59-5 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUORO-N-OCTANOIC ACID (PFOA) (13C8, 99%) (1350614-84-4)
State or local regulations
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
PERFLUORONONANOIC ACID (PFNA) (13C9, 99%) 97% CHEMICAL PURITY (375-95-1 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUORODECANOIC ACID (13C9, 99%) (335-76-2 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROUNDECANOIC ACID, SODIUM SALT (3,4,5,6,7,8,9,10,11-13C9, 99%) 90% CP (60871-96-7 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUORODODECANOIC ACID, SODIUM SALT (DODECANOYL-13C12, 99%) (307-67-5 (Unlabeled))
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
PERFLUOROTETRADECANOIC ACID (13C2, 99%) (376-06-7)
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
ISOPROPANOL UNLABELED (67-63-0 (Unlabeled))
State or local regulations
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2

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Lact.	Reproductive toxicity (Lact.)
Met. Corr. 1	Corrosive to metals Category 1
Repr. 1A	Reproductive toxicity Category 1A
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H362	May cause harm to breast-fed children
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R11	Highly flammable
R20	Harmful by inhalation
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R20/22	Harmful by inhalation and if swallowed
R22	Harmful if swallowed
R23/25	Toxic by inhalation and if swallowed
R25	Toxic if swallowed
R34	Causes burns
R35	Causes severe burns
R36	Irritating to eyes
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R40	Limited evidence of a carcinogenic effect
R41	Risk of serious damage to eyes
R48	Danger of serious damage to health by prolonged exposure
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52	Harmful to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R60	May impair fertility
R61	May cause harm to the unborn child
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R67	Vapors may cause drowsiness and dizziness
C	Corrosive
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful

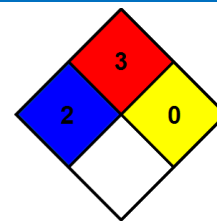
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NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 3 Serious Hazard
Physical	: 0 Minimal Hazard

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product