

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 4/5/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : FLUORENE (13C6, 99%) 100 UG/ML IN NONANE

Product code : CLM-3596-S

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Cambridge Isotope Laboratories, Inc.

50 Frontage Rd

01810

ANDOVER, MA, 01810

USA

T 1-800-322-1174

cilsales@isotope.com - www.isotope.com

1.4. Emergency telephone number

Emergency number : 1-703-741-5970

Chemtrec 1-800-424-9300 24 hours

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3 H226 Flammable liquid and vapor Acute toxicity (inhalation) Category 4 H332 Harmful if inhaled Skin corrosion/irritation Category 2 H315 Causes skin irritation Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation Specific target organ toxicity – Single exposure, Category 3, Narcosis H336 May cause drowsiness or dizziness H304 Aspiration hazard Category 1 May be fatal if swallowed and enters airways

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

Hazard statements (GHS US) : H226 - Flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P233 - Keep container tightly closed.

P240 - Ground/Bond container and receiving equipment.

P241 - Use explosion-proof electrical/ventilating/lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor.

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.

P312 - Call a poison center or doctor if you feel unwell.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P331 - Do NOT induce vomiting.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P370+P378 - In case of fire: Use media other than water 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 which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
N-NONANE UNLABELED	CAS-No.: 111-84-2	99.986	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
FLUORENE (RING-13C6, 99%)	CAS-No.: 86-73-7	0.014	Carc. 1A, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison

center/doctor/physician if you feel unwell. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin

irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several 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. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and

symptoms

Symptoms/effects

: 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.

: May cause drowsiness or dizziness.

Symptoms/effects after inhalation : Harmful if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation. May be harmful in contact with skin.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Risk of lung edema.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Alcohol resistant foam.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Wear personal protective equipment. Ventilate spillage area. No open flames, no sparks, and no

smoking. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes.

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. Avoid release to the environment.

4/5/2023 (Issue date) US - en 3/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.3. Methods and material for containment and cleaning up

For containment

: Dike and contain spill. Dispose as hazardous waste. Comply with local regulations for disposal.

Methods for cleaning up

: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Small quantities of liquid spill: take up in non-combustible absorbent

material and shovel into container for disposal.

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

Additional hazards when processed

: Avoid all contact with skin, eyes, or clothing. Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer). Take precautionary measures against static discharges.

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. Use only outdoors or in a well-ventilated area. Avoid breathing fume, gas, mist, spray, vapors. Avoid

contact with skin and eyes.

Hygiene measures

: 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

: Store in a well-ventilated place. Keep container tightly closed. Keep dry. Ground/bond container and receiving equipment.

Storage conditions

: Store at room temperature away from light and moisture.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE		
USA - ACGIH - Occupational Exposure Limits		
Local name	Nonane	
ACGIH OEL TWA [ppm]	200 ppm USA. ACGIH Threshold Limit Values (TLV)	
Remark (ACGIH)	CNS impair	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.	
USA - OSHA - Occupational Exposure Limits		
OSHA PEL TWA [1]	1050 mg/m³ USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000	
OSHA PEL TWA [2]	200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000	
OSHA PEL C	1050 California permissible exposure limits for chemical contaminants.	
OSHA PEL C [ppm]	200 ppm California permissible exposure limits for chemical contaminants.	

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE		
USA - NIOSH - Occupational Exposure Limits		
NIOSH REL TWA	1050 mg/m³ USA. NIOSH Recommended Exposure Limits	
NIOSH REL TWA [ppm]	200 ppm USA. NIOSH Recommended Exposure Limits	
Remark (NIOSH)	Central Nervous System impairment	
N-NONANE UNLABELED (111-84-2)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Nonane	
ACGIH OEL TWA [ppm]	200 ppm USA. ACGIH Threshold Limit Values (TLV)	
Remark (ACGIH)	CNS impair	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.	
USA - OSHA - Occupational Exposure Limits		
OSHA PEL TWA [1]	1050 mg/m³ USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000	
OSHA PEL TWA [2]	200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000	
OSHA PEL C	1050 California permissible exposure limits for chemical contaminants.	
OSHA PEL C [ppm]	200 ppm California permissible exposure limits for chemical contaminants.	
USA - NIOSH - Occupational Exposure Limits		
NIOSH REL TWA	1050 mg/m³ USA. NIOSH Recommended Exposure Limits	
NIOSH REL TWA [ppm]	200 ppm USA. NIOSH Recommended Exposure Limits	
Remark (NIOSH)	Central Nervous System impairment	
FLUORENE (RING-13C6, 99%) (86-73-7)		
No additional information available		

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Protective clothing. Protective goggles. Gloves. Self-contained breathing apparatus.

Protective clothing. Protective goggles: Gloves. Self-contained breatning apparatus.
Materials for protective clothing:
Wear suitable protective clothing and gloves
Hand protection:
protective gloves
Eye protection:
Chemical goggles or face shield. Chemical goggles or safety glasses
Skin and body protection:
Wear suitable protective clothing, gloves and eye/face protection

4/5/2023 (Issue date) US - en 5/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Approved respirator

Personal protective equipment symbol(s):











SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Color : Colorless

Odor : Mixture contains one or more component(s) which have the following odour:

Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : -53 °C (-63 °F) - lit
Boiling point : 151 °C (304 °F) - lit
Flash point : 31 °C (87.8 °F) - closed cup

Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas)

: Not applicable.

Vapor pressure : 5.69 hPa (4.27 mmHg) at 25 °C (77 °F)

Relative vapor density at 20°C : No data available Relative density : No data available

Density : 0.718 g/ml at 25 °C (77 °F)

Molecular mass : 128.3 g/mol Solubility : Water: 0.0002 %

Partition coefficient n-octanol/water (Log Pow) : 5.65

Auto-ignition temperature : 205 °C (401 °F)

Decomposition temperature : No data available

Viscosity, kinematic : ≤ 1.008 mm²/s at 20 °C (68 °F)

Viscosity, dynamic : No data available Explosion limits : 0.87 – 2.9 % (V) Explosive properties : No data available Oxidizing properties : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

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.

4/5/2023 (Issue date) US - en 6/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE		
LC50 Inhalation - Rat	23760 mg/m³ male - 4 h	
ATE US (gases)	4500 ppmV/4h	
ATE US (vapors)	11 mg/l/4h	
ATE US (dust, mist)	1.5 mg/l/4h	
Additional data	Skin corrosion/irritation, Dermal, rat: Result: Skin Irritation (Draize Test) S. Typhimurium Result negative	

LC50 Inhalation - Rat	23760 mg/m³ male - 4 h
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
Skin corrosion/irritation, Dermal, rat	Result: Skin Irritation (Draize Test)
Additional information	: S. Typhimurium Result: negative

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

FLUORENE	(RING-13C6, 99%)	(86-73-7)
----------	------------------	-----------

IARC group 3 - Not classifiable

Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

N-NONANE UNLABELED (111-84-2)

STOT-single exposure May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : May be fatal if swallowed and enters airways.

Viscosity, kinematic : ≤ 1.008 mm²/s at 20 °C (68 °F)

4/5/2023 (Issue date) US - en 7/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

N-NONANE UNLABELED (111-84-2)		
Viscosity, kinematic	≤ 1.008 mm²/s at 20 °C (68 °F)	
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.	
Symptoms/effects	: May cause drowsiness or dizziness.	
Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.	
Symptoms/effects after skin contact	: Causes skin irritation. May be harmful in contact with skin.	
Symptoms/effects after eye contact	: Causes serious eye irritation.	
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. Risk of lung edema.	

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.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE		
Partition coefficient n-octanol/water (Log Pow)	5.65	
Bioaccumulative potential	Indication of bioaccumulation.	
N-NONANE UNLABELED (111-84-2)		
Partition coefficient n-octanol/water (Log Pow)	5.65	
Bioaccumulative potential	Indication of bioaccumulation.	
FLUORENE (RING-13C6, 99%) (86-73-7)		
BCF - Fish [1]	Oncorhynchus mykiss (rainbow trout) - 24 h	
Bioconcentration factor (BCF REACH)	Bioconcentration factor (BCF): 512	

12.4. Mobility in soil

FLUORENE (RING-13C6, 99%) (86-73-7)	
Ecology - soil	Not available.

12.5. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations.

SECTION 13: Disposal considerations

13.1. Disposal 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.

4/5/2023 (Issue date) US - en 8/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA NO : UN1920 UN-No. (TDG) : UN1920 UN-No. (IMDG) : 1920 UN-No. (IATA) : 1920

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Nonanes
Proper Shipping Name (TDG) : NONANES
Proper Shipping Name (IMDG) : NONANES
Proper Shipping Name (IATA) : Nonanes

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3
Hazard labels (DOT) : 3



TDG

Transport hazard class(es) (TDG) : 3 Hazard labels (TDG) : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Hazard labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



4/5/2023 (Issue date) US - en 9/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.4. Packing group

Packing group (DOT) : III : III Packing group (TDG) : III Packing group (IMDG) Packing group (IATA) : 111

14.5. Environmental hazards

Marine pollutant : Yes (IMDG only)



Other information : No supplementary information available.

14.6. Special precautions for user

UN-No.(DOT) : UN1920

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a

flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this

subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(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) : 203 DOT Packaging Bulk (49 CFR 173.xxx) : 242 DOT Quantity Limitations Passenger aircraft/rail (49 : 60 L

CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L

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

UN-No. (TDG) : UN1920 Explosive Limit and Limited Quantity Index : 5 L : E1 Excepted quantities (TDG) Passenger Carrying Road Vehicle or Passenger : 60 L

Carrying Railway Vehicle Index

Emergency Response Guide (ERG) Number : 128

IMDG

Limited quantities (IMDG) : 5 L : E1 Excepted quantities (IMDG)

4/5/2023 (Issue date) US - en 10/13

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T2
Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER

Stowage category (IMDG) : A Flash point (IMDG) : '

Properties and observations (IMDG) : Colourless liquids. Explosive limits: 0.8% to 2.9% normal-NONANE: flashpoint 31°C c.c.

Immiscible with water. Irritating to skin, eyes and mucous membranes.

MFAG-No : 128

IATA

PCA Excepted quantities (IATA) : E1 : Y344 PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) : 10L PCA packing instructions (IATA) : 355 PCA max net quantity (IATA) : 60L CAO packing instructions (IATA) : 366 CAO max net quantity (IATA) : 220L ERG code (IATA) : 3L

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE	
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

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
N-NONANE UNLABELED	111-84-2	Present	Active	Т
FLUORENE (RING-13C6, 99%)	86-73-7	Present	Active	

N-NONANE UNLABELED (111-84-2)	
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

FLUORENE (RING-13C6, 99%) (86-73-7)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE

Listed on the Canadian DSL (Domestic Substances List)

N-NONANE UNLABELED (111-84-2)

Listed on the Canadian DSL (Domestic Substances List)

FLUORENE (RING-13C6, 99%) (86-73-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

15.3. US State regulations

FLUORENE (13C6, 99%) 100 UG/ML IN NONANE	
	U.S New Jersey - Right to Know Hazardous Substance List U.S Massachusetts - Right To Know List U.S Pennsylvania - RTK (Right to Know) List

Component	State or local regulations
N-NONANE UNLABELED(111-84-2)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Massachusetts - Right To Know List; U.S Pennsylvania - RTK (Right to Know) List
FLUORENE (RING-13C6, 99%)(86-73-7)	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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 H-phrases	
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases	
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H350	May cause cancer
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

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.