



13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 16/12/2016

Revision date:

Version: 1.0

ES-5479

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

1.1. Product identifier

Product form : Mixture
Product name : 13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)
Product code : ES-5479

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. 3	H226
Acute Tox. 4 (Inhalation)	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H336
Asp. Tox. 1	H304

Full text of H-statements: see section 16

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

R10
Xn; R20
Xi; R36/37/38
Xn; R65

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 3	H226
Acute Tox. 4 (Inhalation)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
STOT SE 3	H336
Asp. Tox. 1	H304

Adverse physicochemical, human health and environmental effects

Central Nervous System.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H226 - Flammable liquid and vapour
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 (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 equipment
P261 - Avoid breathing dust, fume, gas, mist, spray, vapours
P264 - Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective clothing, protective gloves

GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapour
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, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust, fume, gas, mist, spray, vapours
P264 - Wash Both hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective clothing, protective gloves
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) 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 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide., Dry powder., Water spray for extinction
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 Comply with applicable regulations

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No) 111-84-2 (EC no) 203-913-4	99.99443	R10 Xn; R20 Xn; R65 R67 Xi; R38
PENTACHLOROBENZENE (13C6, 99%)	(CAS No) 608-93-5 (Unlabeled) (EC no) 210-172-0 (EC index no) 602-074-00-5	0.0007	F; R11 Xn; R22 N; R51/53
HEXACHLOROBENZENE (13C6, 99%)	(EC no) 204-273-9 (EC index no) 602-065-00-6	0.0007	Not classified
BETA-BHC (13C6, 99%)	(CAS No) 319-85-7 (Unlabeled) (EC no) 206-271-3 (EC index no) 602-042-00-0	0.0007	Carc.Cat.2; R45 Xn; R21 N; R50/53
ALDRIN (13C12, 99%)	(CAS No) 309-00-2 (Unlabeled) (EC no) 206-215-8 (EC index no) 602-048-00-3	0.0007	Carc.Cat.3; R40 T; R24/25 N; R50/53
ENDOSULFAN-II (13C9, 99%)	(CAS No) 33213-65-9 (Unlabeled)	0.0007	T; R24/25 Xi; R36 N; R50/53
ENDRIN (13C12, 99%)	(CAS No) 72-20-8 (Unlabeled) (EC no) 200-775-7 (EC index no) 602-051-00-X	0.0007	T+; R28 T; R24 N; R50/53
ENDOSULFAN-I (13C9, 99%)	(CAS No) 959-98-8	0.0007	T; R24/25 Xi; R36 N; R50/53
CIS-CHLORDANE (13C10, 99%)	(CAS No) 475275-01-5 (EC no) 225-825-5	0.0007	T; R24 Xn; R20/22 Xi; R36/37/38 N; R50/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-NONANE UNLABELED	(CAS No) 111-84-2 (EC no) 203-913-4	99.99443	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304
PENTACHLOROBENZENE (13C6, 99%)	(CAS No) 608-93-5 (Unlabeled) (EC no) 210-172-0 (EC index no) 602-074-00-5	0.0007	Flam. Sol. 1, H228 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
HEXACHLOROBENZENE (13C6, 99%)	(EC no) 204-273-9 (EC index no) 602-065-00-6	0.0007	Not classified
BETA-BHC (13C6, 99%)	(CAS No) 319-85-7 (Unlabeled) (EC no) 206-271-3 (EC index no) 602-042-00-0	0.0007	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
ALDRIN (13C12, 99%)	(CAS No) 309-00-2 (Unlabeled) (EC no) 206-215-8 (EC index no) 602-048-00-3	0.0007	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Carc. 2, H351 STOT SE 1, H370 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
ENDOSULFAN-II (13C9, 99%)	(CAS No) 33213-65-9 (Unlabeled)	0.0007	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ENDRIN (13C12, 99%)	(CAS No) 72-20-8 (Unlabeled) (EC no) 200-775-7 (EC index no) 602-051-00-X	0.0007	Acute Tox. 1 (Oral), H300 Acute Tox. 2 (Dermal), H310 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
ENDOSULFAN-I (13C9, 99%)	(CAS No) 959-98-8	0.0007	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
CIS-CHLORDANE (13C10, 99%)	(CAS No) 475275-01-5 (EC no) 225-825-5	0.0007	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	GHS-US classification
N-NONANE UNLABELED	(CAS No) 111-84-2	99.99443	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304

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

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Move out of dangerous area. Consult a physician and show this safety data sheet.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash with soap and plenty of water. Consult a physician.
- First-aid measures after eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
- First-aid measures after ingestion : Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries after inhalation : May cause drowsiness or dizziness.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : For small fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.
- Reactivity : Vapors may form explosive mixture with air.

5.3. Advice for firefighters

- Firefighting instructions : Wear self contained breathing apparatus for fire fighting if necessary.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

For containment : Contain spillage, then collect with non-combustible absorbent material. Disposal should be in accordance with applicable Federal, State and local regulations.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a dry and well-ventilated place.
Storage conditions : Store at room temperature away from light and moisture.
Incompatible materials : Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.000000000 ppm Central Nervous System impairment.
HEXACHLOROBENZENE (13C6, 99%)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.000000000 mg/m ³ Central Nervous System impairment. Porphyrin effects. Skin damage.
ALDRIN (13C12, 99%) (309-00-2 (Unlabeled))		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.050000000 mg/m ³ Skin contact does contribute to exposure. Confirmed animal carcinogen.
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.250000000 mg/m ³ Skin notation
N-NONANE UNLABELED (111-84-2)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200.000000000 ppm Central Nervous System impairment.
ENDRIN (13C12, 99%) (72-20-8 (Unlabeled))		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.100000000 mg/m ³ Central Nervous System impairment, Headache, Liver damage
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.100000000 mg/m ³ Danger of cutaneous absorption, not classifiable a a human carcinogen

8.2. Exposure controls

Personal protective equipment : Gloves. Protective goggles. Protective clothing. Self-contained breathing apparatus.



Hand protection : protective gloves.
Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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	: 128.3 g/mol (Labeled)
Colour	: Colourless.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -53 °C (- 63 °F) - lit
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Auto-ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour
Vapour pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.718 g/ml at 25 °C (77 °F)
Solubility	: Water: 0 %
Log Pow	: 5.65
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form explosive mixture with air.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)	
LC50 inhalation rat (mg/l)	23760 mg/m ³ male - 4 h
LC50 inhalation rat (ppm)	3200 ppm/4h
ATE CLP (gases)	3200.000 ppmv/4h
ATE CLP (vapours)	11.000 mg/l/4h
ATE CLP (dust,mist)	1.500 mg/l/4h

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

PENTACHLOROBENZENE (13C6, 99%) (608-93-5 (Unlabeled))	
LD50 oral rat	1080 mg/kg
ATE CLP (oral)	1080.000 mg/kg bodyweight
HEXACHLOROBENZENE (13C6, 99%)	
LD50 oral rat	10000 mg/kg
LC50 inhalation rat (mg/l)	3600 mg/m ³
BETA-BHC (13C6, 99%) (319-85-7 (Unlabeled))	
LD50 oral rat	6000 mg/kg
ATE CLP (oral)	100.000 mg/kg bodyweight
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ALDRIN (13C12, 99%) (309-00-2 (Unlabeled))	
LD50 oral rat	39.0 mg/kg
ATE CLP (oral)	39.000 mg/kg bodyweight
ATE CLP (dermal)	15.000 mg/kg bodyweight
N-NONANE UNLABELED (111-84-2)	
LC50 inhalation rat (mg/l)	23760 mg/m ³ male - 4 h
LC50 inhalation rat (ppm)	3200 ppm/4h
ATE CLP (gases)	3200.000 ppmv/4h
ATE CLP (vapours)	11.000 mg/l/4h
ATE CLP (dust,mist)	23.760 mg/l/4h
ENDOSULFAN-II (13C9, 99%) (33213-65-9 (Unlabeled))	
LD50 oral rat	240 mg/kg
ATE CLP (oral)	240.000 mg/kg bodyweight
ENDRIN (13C12, 99%) (72-20-8 (Unlabeled))	
LD50 oral rat	3.0 mg/kg
LD50 dermal rabbit	60.0 mg/kg
ATE CLP (oral)	3.000 mg/kg bodyweight
ATE CLP (dermal)	60.000 mg/kg bodyweight
ENDOSULFAN-I (13C9, 99%) (959-98-8)	
LD50 oral rat	76 mg/kg
ATE CLP (oral)	76.000 mg/kg bodyweight
CIS-CHLORDANE (13C10, 99%) (475275-01-5)	
LD50 oral rat	500 mg/kg

Skin corrosion/irritation	: Causes skin irritation. Skin - rat - Skin irritation - Draize test
Serious eye damage/irritation	: Causes serious eye irritation. No data available
Respiratory or skin sensitisation	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness. May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential adverse human health effects and symptoms	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: Ecological information

12.1. Toxicity

PENTACHLOROBENZENE (13C6, 99%) (608-93-5 (Unlabeled))	
LC50 fish 1	0.247 mg/l - Pimephales promelas (fathead minnow) - 96 h
HEXACHLOROBENZENE (13C6, 99%)	
LC50 fish 1	7.6 mg/l Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	Daphnia magna (Water flea) - 48 h
NOEC (chronic)	Pimephales promelas (fathead minnow) - 96 h
BETA-BHC (13C6, 99%) (319-85-7 (Unlabeled))	
LC50 fish 1	1.6 mg/l Poecilia reticulata (guppy) - 96 h
ALDRIN (13C12, 99%) (309-00-2 (Unlabeled))	
LC50 fish 1	0.01 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	0.03 mg/l Daphnia magna (Water flea) - 48 h
ENDOSULFAN-II (13C9, 99%) (33213-65-9 (Unlabeled))	
LC50 fish 1	>= 0.0066 mg/l Other fish - 96 h
EC50 Daphnia 1	<= 1 mg/l Daphnia magna (Water flea) - 48 h
ENDRIN (13C12, 99%) (72-20-8 (Unlabeled))	
LC50 fish 1	< 0.001 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	>= 0.02 mg/l Daphnia pulex (Water flea) - 48 h
CIS-CHLORDANE (13C10, 99%) (475275-01-5)	
LC50 fish 1	0.0074 mg/l - Lepomis macrochirus (Bluegill) - 96 h

12.2. Persistence and degradability

CIS-CHLORDANE (13C10, 99%) (475275-01-5)	
Persistence and degradability	Not available.

12.3. Bioaccumulative potential

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
BETA-BHC (13C6, 99%) (319-85-7 (Unlabeled))	
Log Pow	3.78
ALDRIN (13C12, 99%) (309-00-2 (Unlabeled))	
Log Pow	6.50
N-NONANE UNLABELED (111-84-2)	
Log Pow	5.65
Bioaccumulative potential	Indication of bioaccumulation.
ENDRIN (13C12, 99%) (72-20-8 (Unlabeled))	
Log Pow	5.20

12.4. Mobility in soil

CIS-CHLORDANE (13C10, 99%) (475275-01-5)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.
Waste 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.

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Additional information : Handle empty containers with care because residual vapours are flammable.
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) : 1920
DOT NA no. UN1920

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Nonanes
Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger
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)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
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
Marine pollutant : No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR) : III
Class (ADR) : 3 - Flammable liquids
Hazard identification number (Kemler No.) : 30
Classification code (ADR) : F1
Danger labels (ADR) : 3 - Flammable liquids



Orange plates : An orange rectangular label with a black border. It is divided into two horizontal sections. The top section contains the number '30' and the bottom section contains the number '1920'.

Tunnel restriction code : D/E
Limited quantities (ADR) : 5l
EAC code : 3Y
Excepted quantities (ADR) : E1

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%) ES-5479

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
MFAG-No : 128

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 60 L
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 : 220 L
CFR 175.75)

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

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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N-NONANE UNLABELED (111-84-2)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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15.2. International regulations

CANADA

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

13C PESTICIDE STOCK SOLUTION 2 (13C, 99%)()

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 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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N-NONANE UNLABELED (111-84-2)

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
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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-statements:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
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Safety Data Sheet

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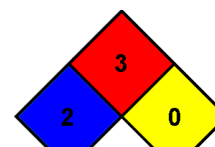
Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) 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 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H226	Flammable liquid and vapour
H228	Flammable solid
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H370	Causes damage to organs
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/22	Harmful by inhalation and if swallowed
R21	Harmful in contact with skin
R22	Harmful if swallowed
R24	Toxic in contact with skin
R24/25	Toxic in contact with skin and if swallowed
R28	Very toxic if swallowed
R36	Irritating to eyes
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
T	Toxic
T+	Very toxic
Xi	Irritant
Xn	Harmful

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.



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Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

HMIS III 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