

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

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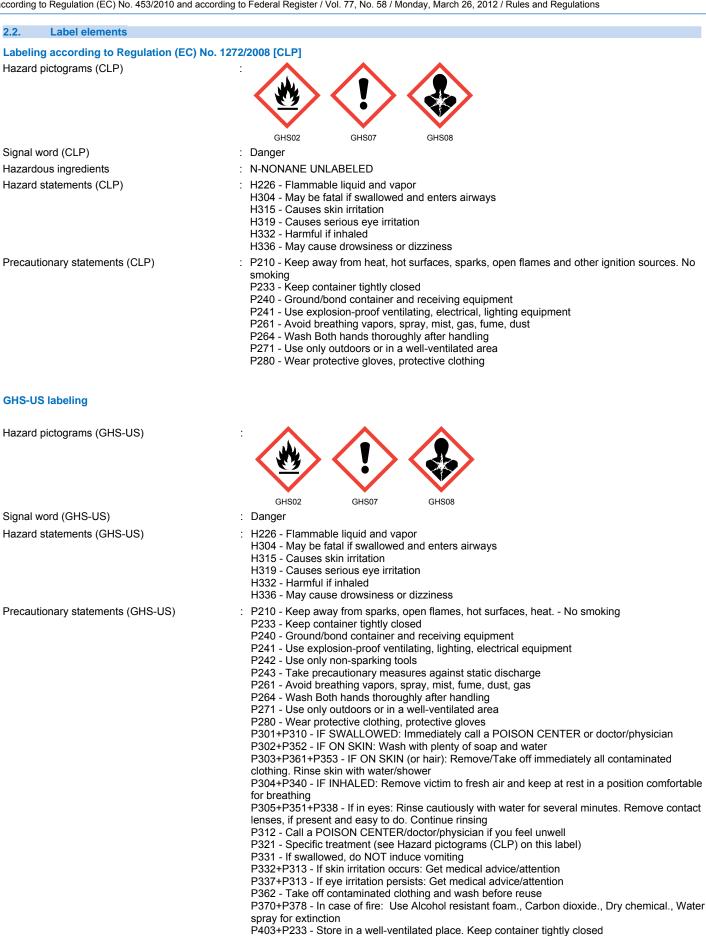
ECN-2630

1.1. Product identifier		
Product form	: Mixtures	
Product name.	: 1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML IN NONANE	
Product name 1,2,3-1 RICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ME IN NONANE Product code : ECN-2630		
I.2. Relevant identified uses of the su	ubstance or mixture and uses advised against	
I.2.1. Relevant identified uses		
ndustrial/Professional use spec	: For professional use only.	
I.2.2. Uses advised against		
No additional information available		
1.3. Details of the supplier of the safe	ety 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: 1-202-483-7616 (24 hours)		
SECTION 2: Hazards identification	1	
2.1. Classification of the substance o	r mixture	
Classification according to Regulation (EC	C) No. 1272/2008 [CLP]	
Flam. Liq. 3	H226	
Acute Tox. 4 (Inhalation:dust,mist)	H332	
Skin Irrit. 2	H315	
Eye Irrit. 2	H319	
STOT SE 3		
	H336	
Asp. Tox. 1	H304	
Full text of H-phrases: see section 16		
Classification according to Directive 67/54 Xn; R20 Xn; R65 R10	8/EEC or 1999/45/EC	
Full text of R-phrases: see section 16		
Classification (GHS-US)		
Flam. Lig. 3	H226	
	H332	
Acute Tox. 4 (Inhalation:dust,mist)	H315	
Skin Irrit. 2		
	H319 H336	

Central Nervous System.

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# 1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML

## IN NONANE ECN-2630

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P403+P235 - Store in a well-ventilated place. Keep cool

P405 - Store locked up

P501 - Dispose of contents/container to Comply with applicable regulations.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

3.2. Mixtures
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Name	Product identifier	%	Classification according to Directive 67/548/EEC
N-NONANE UNLABELED	(CAS No)111-84-2 (EC no)203-913-4	99.9861	R10 Xn; R20 Xn; R65 R67
1,2,3-TRICHLORONAPHTHALENE UNLABELED	(CAS No)50402-52-3 (Unlabeled) (EC no)218-101-4	0.0139	Xn; R22 Xi; R41 Xi; R36/37 N; R51/53
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	99.9861	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
1,2,3-TRICHLORONAPHTHALENE UNLABELED	(CAS No)50402-52-3 (Unlabeled) (EC no)218-101-4	0.0139	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 Aquatic Chronic 2, H411
Name	Product identifier	%	Classification (GHS-US)
N-NONANE UNLABELED	(CAS No)111-84-2	99.9861	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

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

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash with plenty of soap and water. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Immediately call a POISON CENTER or doctor/physician.
4.2. Most important symptoms and effect	ts, both acute and delayed
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. 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.

# 1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML

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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	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.			
5.2. Special hazards arising from the su	Ibstance or mixture			
Fire hazard	: Flammable liquid and vapor.			
Explosion hazard	: May form flammable/explosive vapor-air mixture.			
5.3. Advice for firefighters				
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.			
SECTION 6: Accidental release mea				
	quipment and emergency procedures			
General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No			
Scheral measures	smoking.			
6.1.1. For non-emergency personnel				
No additional information available				
6.1.2. For emergency responders				
Protective equipment	: Avoid breathing dust, mist or spray.			
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 containm	ent and cleaning up			
No additional information available				
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 vapors are flammable.			
Precautions for safe handling	No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing dust, mist or spray.			
Hygiene measures	: Wash Both hands thoroughly after handling.			
7.2. Conditions for safe storage, includ	ing any incompatibilities			
Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.			
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/pers	sonal protection			

### 8.1. Control parameters

N-NONANE UNLABELED (111-84-2)		
Italy - Portugal- USA ACGIH	ACGIH TWA (ppm)	200.0000000000 ppm Central Nervous System
		impairment.

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# 8.2. Exposure controls Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



	recommended. Wear respiratory protection
SECTION 9: Physical and chemica	al properties
9.1. Information on basic physical an	d chemical properties
The properties listed below are for the solvent, the main com	ponent of this mixture.
Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 128.3
Color	: No data available.
Odor	: No data available
Odor threshold	: No data available
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -53 °C (- 63 °F) - lit
Freezing point	: No data available
Boiling point	: 151 °C (304 °F) - lit
Flash point	: 31.0 °C (87.8 °F) - closed cup
Self ignition temperature	: 205 °C (401 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor
Vapor pressure	: 12.4 hPa (9.3 mmHg) at 37.7 °C (99.9 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
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
Oxidizing properties	: No data available
Explosive limits	: 0.87 - 2.9 % (V)
9.2. Other information	

	No additional	information	available
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SECTI	ON 10: Stability and reactivity	
10.1.	Reactivity	
No addit	ional information available	
10.2.	Chemical stability	
See stor	age and expiration date on CoA.	
10.3.	Possibility of hazardous reactions	
No additional information available		
10.4.	Conditions to avoid	
Open fla	me. Overheating. Direct sunlight. Heat. Sparks.	
10.5.	Incompatible materials	
No addit	ional information available	

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10.6. Hazardous decomposition products			
May release flammable gases.			
SECTION 11: Toxicological information	on		
11.1. Information on toxicological effects			
Acute toxicity	: Harmful if inhaled.		
1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML IN NONANE			
ATE (dust, mist)	1.500 mg/l/4h		
N-NONANE UNLABELED (111-84-2)			
LC50 inhalation rat (ppm)	3200 ppm/4h		
ATE (dust, mist)	1.500 mg/l/4h		
1,2,3-TRICHLORONAPHTHALENE UNLABELED (50402-52-3 (Unlabeled))			
ATE (oral)	500.000 mg/kg body weight		
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		
Reproductive toxicity	: Not classified		
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.		
Specific target organ toxicity (repeated exposure)	: Not classified		
Aspiration hazard	: May be fatal if swallowed and enters airways.		
Potential Adverse human health effects and symptoms	: Harmful if inhaled.		
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. 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.		

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12.1. Toxicity
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No additional information available

#### 12.2. Persistence and degradability

N-NONANE UNLABELED (111-84-2)		
Not available.		
1,2,3-TRICHLORONAPHTHALENE UNLABELED (50402-52-3 (Unlabeled))		
Not available.		
12.3. Bioaccumulative potential		
1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML IN NONANE		
Log Pow 5.65		
N-NONANE UNLABELED (111-84-2)		
5.65		
Indication of bioaccumulation.		
1,2,3-TRICHLORONAPHTHALENE UNLABELED (50402-52-3 (Unlabeled))		
Bioaccumulative potential Not available.		
12.4. Mobility in soil		
N-NONANE UNLABELED (111-84-2)		
Not available.		

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	Not available.
Ecology - soil	
12.5. Results of PBT and vPvB assessme	ent
No additional information available	
12.6. Other adverse effects	
No additional information available	
SECTION 13: Disposal consideratio	ns
I3.1. Waste treatment methods	
Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Loca environmental control regulations.
Naste disposal recommendations	: Dispose of contents/container to Comply with applicable regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Hazardous waste due to toxicity.
SECTION 14: Transport information	
n accordance with ADR / RID / ADNR / IMDG /	
I4.1. UN number	
JN-No.(DOT)	: 1920
DOT NA no.	UN1920
I4.2. UN proper shipping name	
DOT Proper Shipping Name	: Nonanes
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid
	3
Packing group (DOT)	: III - Minor Danger
Packing group (DOT) DOT Special Provisions (49 CFR 172.102)	<ul> <li>III - Minor Danger</li> <li>B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then th bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.</li> <li>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 liquid with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 52 for UN2672).</li> <li>T2 - 1.5 178.274(d)(2) Normal</li></ul>
DOT Special Provisions (49 CFR 172.102)	<ul> <li>B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then th bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.</li> <li>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 liquid with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 52 for UN2672).</li> <li>T2 - 1.5 178.274(d)(2) Normal</li></ul>
	<ul> <li>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 flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.</li> <li>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 liquid with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 4 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Tab 2 for UN2672).</li> <li>T2 - 1.5 178.274(d)(2) Normal</li></ul>

### 14.3. Additional information

Other information

: No supplementary information available.

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Overland transport	
Packing group (ADR)	
Class (ADR)	: 3 - Flammable liquid
Hazard identification number (Kemler No.)	: 30
Classification code (ADR)	: F1
Danger labels (ADR)	: 3 - Flammable liquids
Orange plates	<sup>3</sup> 30 1920
Tunnel restriction code	: D/E
Limited quantities (ADR)	5L
EAC	: 3Y
Excepted quantities (ADR)	: E1
	,
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 (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 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 Anne	x II of MARPOL 73/78 and the IBC Code
Not applicable	
SECTION 15: Regulatory information	
15.1. US Federal regulations	
1,2,3-TRICHLORONAPHTHALENE (PCN-13)	
SARA Section 311/312 Hazard Classes	Fire hazard
	Immediate (acute) health hazard
N-NONANE UNLABELED (111-84-2)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

### 15.2. International regulations

#### CANADA

1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML IN NONANE

Listed on the Canadian DSL (Domestic Substances List) inventory.

### 15.2.1. National regulations

No additional information available

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15.3. US State regulations		
1,2,3-TRICHLORONAPHTHALENE (PCN-13) UNLABELED 100 UG/ML IN NONANE()		
State or local regulations	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.	

### 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-phrases::

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 Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects
R10	Flammable
R20	Harmful by inhalation
R22	Harmful if swallowed
R36/37	Irritating to eyes and respiratory system
R41	Risk of serious damage to eyes
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	Vapors may cause drowsiness and dizziness
Ν	Dangerous for the environment
Xi	Irritant
Xn	Harmful

NFPA health hazard

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

: 3 - Liquids and solids that can be ignited under almost all

NFPA fire hazard

ambient conditions.

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NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

3

0

### HMIS III Rating

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability Physical

Health

- : 3 Serious Hazard
- : 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