

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

1.1. Product identifier

Product form : Mixture
 Product name : MRH/HRH Stock Mix
 Product code : AL0-130092
 Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Laboratory Use
 Industrial/Professional use spec : Industrial
 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

Phenova
 6390 Joyce Dr. Suite 100
 80403 Golden, CO - United States
 T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
 ChemTel Assistance (International) +1 813-248-0585

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
 Carc. 2 H351

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

Carc. Cat. 3; R40
 R10
 Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS08

Signal word (CLP) : Warning
 Hazardous ingredients : Methylene Chloride
 Hazard statements (CLP) : H226 - Flammable liquid and vapor
 H351 - Suspected of causing cancer
 Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P233 - Keep container tightly closed
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

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P308+P313 - IF exposed or concerned: Get medical advice/attention
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

No labeling applicable

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 Regulation (EC) No. 1272/2008 [CLP]
Methylene Chloride (Component)	(CAS No) 75-09-2 (EC no) 200-838-9 (EC index no) 602-004-00-3	97.2	Carc. 2, H351
n-nonane (Component)	(CAS No) 111-84-2 (EC no) 203-913-4	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
tetradecane (Component)	(CAS No) 629-59-4 (EC no) 211-096-0	0.2	Asp. Tox. 1, H304 Aquatic Acute 1, H400

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

No additional information available

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 extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- 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

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up in absorbent material. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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 : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions : Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
Incompatible materials : Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.
Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.
Eye protection : Chemical goggles or safety glasses. Safety glasses.
Skin and body protection : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
Respiratory protection : Wear appropriate mask.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Colorless.
Odor : characteristic.
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable liquid and vapor
Relative density : No data available
Solubility : No data available
Explosive properties : No data available

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Oxidizing properties : No data available
Explosion limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

n-nonane (111-84-2)	
LD50 oral rat	> 15000 mg/kg (Rat; Literature)
LC50 inhalation rat (mg/l)	17 mg/l/4h (Rat; Literature)
LC50 inhalation rat (ppm)	3200 ppm/4h (Rat; Literature)
ATE CLP (gases)	3200.000 ppmV/4h
ATE CLP (vapors)	17.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
tetradecane (629-59-4)	
LD50 oral rat	> 15000 mg/kg body weight (Rat; Equivalent or similar to OECD 423; Experimental value)
LD50 dermal rabbit	> 5000 (Rabbit; Experimental value; Equivalent or similar to OECD 402)
Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)

Skin corrosion/irritation : Not classified
Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified
Based on available data, the classification criteria are not met

Respiratory or skin sensitization : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Suspected of causing cancer.
May cause cancer

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1. Toxicity

n-nonane (111-84-2)	
LC50 fish 2	1 - 10 mg/l (LC50; 96 h; Pisces)
tetradecane (629-59-4)	
LC50 fish 1	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Semi-static system; Fresh water; Experimental value)
EC50 Daphnia 1	0.2 mg/l (EC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	168.2 mg/l (EC50; 48 h)

12.2. Persistence and degradability

MRH/HRH Stock Mix	
Persistence and degradability	Not established.
n-nonane (111-84-2)	
Persistence and degradability	Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil.
BOD (% of ThOD)	1.1 (1 days)
tetradecane (629-59-4)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Low potential for mobility in soil. Adsorbs into the soil. Photodegradation in the air.
Methylene Chloride (75-09-2)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.

12.3. Bioaccumulative potential

MRH/HRH Stock Mix	
Bioaccumulative potential	Not established.
n-nonane (111-84-2)	
BCF fish 1	8118 (BCF)
Log Pow	5.65 (Experimental value)
Bioaccumulative potential	Bioaccumable.
tetradecane (629-59-4)	
Log Pow	7.2 (Experimental value; 8.11; Calculated; Other; 25 °C)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
Methylene Chloride (75-09-2)	
BCF fish 1	2 - 40 (BCF)
Log Pow	1.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

tetradecane (629-59-4)	
Log Koc	log Koc,Other; 5.88; QSAR
Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

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SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 1993
UN-No.(IATA) : 1993
UN-No. (IMDG) : 1993
UN-No.(ADN) : 1993

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, N.O.S.
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III, (D/E)

14.3. Packing group

Class (ADR) : 3
Classification code (ADR) : F1
Class (IATA) : 3
Class (IMDG) : 3
Class (ADN) : 3
Classification code (ADN) : F1
Hazard labels (ADR) : 3



Hazard labels (IATA) : 3



Hazard labels (IMDG) : 3



Hazard labels (ADN) : 3

14.4. Packing group

Packing group (ADR) : III
Packing group (IATA) : III
Packing group (IMDG) : III
Packing group (ADN) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 30
Classification code (ADR) : F1
Orange plates :



Special provision (ADR) : 274, 601, 640E
Transport category (ADR) : 3
Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 5l

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Excepted quantities (ADR) : E1

14.6.2. Transport by sea

Special provision (IMDG) : 223, 274, 955
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP29
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : A

14.6.3. Air transport

CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
PCA packing instructions (IATA) : 355
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA max net quantity (IATA) : 60L
PCA Excepted quantities (IATA) : E1
Special provision (IATA) : A3
ERG code (IATA) : 3L

14.6.4. Inland waterway transport

Special provision (ADN) : 274, 601, 640E
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0
Carriage prohibited (ADN) : No

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions
Contains no REACH candidate substance
Contains no REACH Annex XIV substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

PHV SDS EU

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