

## Safety Data Sheet

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

Date of issue: 06/05/2020 Revision date: 06/05/2020 Version: 1.0

## **SECTION 1: Identification**

1.1. Identification

Product form : Mixture

Product name : MA EPH Aliphatics Mix w/Surr AL0-131038;AL0-131041 Product code

1.2. Recommended use and restrictions on use

: Certified reference material for laboratory use only Use of the substance/mixture

Phenova

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Golden, CO 80403 - 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

May cause drowsiness or dizziness

### SECTION 2: Hazard(s) identification

#### **GHS US classification**

Flammable liquids H225 Highly flammable liquid and vapour

Category 2

Skin corrosion/irritation H315 Causes skin irritation

Category 2

Carcinogenicity Category H350 May cause cancer

Specific target organ

toxicity (single exposure)

Category 3

Specific target organ

toxicity (repeated exposure)

H373

Category 2

Full text of H statements : see section 16

## 2.2. GHS Label elements, including precautionary statements

H336

#### **GHS US labeling**

Hazard pictograms (GHS US)







May cause damage to organs through prolonged or repeated exposure

Signal word (GHS US) : Danger

Hazard statements (GHS US) H225 - Highly flammable liquid and vapour

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

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

smoking.

P233 - Keep container tightly closed.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P271 - Use only outdoors or in a well-ventilated area.

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

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P308+P313 - If exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

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

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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+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

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#### 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	Conc.
hexane (Component)	(CAS-No.) 110-54-3	98.35
naphthalene	(CAS-No.) 91-20-3	0.1

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

## **SECTION 4: First-aid measures**

4.1.	Description	of first aid	magailrag
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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 : 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 : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash

with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation

occurs: Get medical advice/attention. Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Potential Adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## **SECTION 5: Fire-fighting measures**

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapor-air mixture.

## 5.3. Special protective equipment and precautions for fire-fighters

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.

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#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.

Emergency procedures : Ventilate area

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 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. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only

outdoors or in a well-ventilated area.

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 in fireproof place. 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.

#### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

MA EPH Aliphatics Mix w/Surr		
ACGIH	Local name	n-Hexane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	CNS impair; peripheral neuropathy; eye irr; Skin; BEI
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
hexane (110-54-3)		
ACGIH	Local name	n-Hexane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	CNS impair; peripheral neuropathy; eye irr; Skin; BEI
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	500 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
naphthalene (91-20	0-3)	
ACGIH	Local name	Naphthalene
ACGIH	ACGIH TWA (ppm)	10 ppm (Naphthalene; USA; Time-weighted average

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exposure limit 8 h; TLV - Adopted Value)

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naphthalene (91-20-3)	naphthalene (91-20-3)		
ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)	
ACGIH	Regulatory reference	ACGIH 2018	
OSHA	OSHA PEL (TWA) (mg/m³)	50 mg/m³	
OSHA	OSHA PEL (TWA) (ppm)	10 ppm	
OSHA	Regulatory reference (US-OSHA)	OSHA	

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

#### 8.3. Individual protection measures/Personal protective equipment

#### 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 suitable protective clothing. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact

#### Respiratory protection:

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

## Personal protective equipment symbol(s):







#### Other information:

Do not eat, drink or smoke during use.

## **SECTION 9: Physical and chemical properties**

9.1.	Information on basic physical	and chem	ical properties
Physica	al state	: L	_iquid
		: (	Colorless
		: 0	characteristic
Odor th	reshold	: 1	No data available
рН		: 1	No data available
Melting	point	: 1	No data available
Freezin	g point	: 1	No data available
Boiling	point	: 1	No data available
Flash p	oint	: 1	No data available

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

Flammability (solid, gas) : Highly flammable liquid and vapour.

Vapor pressure No data available Relative vapor density at 20 °C : No data available : No data available Relative density Solubility : No data available Log Pow : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature : No data available Viscosity, kinematic Viscosity, dynamic : No data available **Explosion limits** : No data available 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

No additional information available

#### 10.2. Chemical stability

Highly flammable liquid and vapour. 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.

## 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

hexane (110-54-3)	
LD50 oral rat	16000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 3350 mg/kg body weight (Equivalent or similar to OECD 402, 4 h, Rabbit, Male, Readacross, Dermal)
LC50 inhalation rat (ppm)	> 5000 ppm (Equivalent or similar to OECD 403, 24 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	16000 mg/kg body weight

naphthalene (91-20-3)		
LD50 oral rat	> 1100 mg/kg (Rat)	
LD50 dermal rat	> 2500 mg/kg (Rat)	
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)	
ATE US (oral)	500 mg/kg body weight	

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

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Carcinogenicity : May cause cancer.

naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Potential Adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation.

## SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

naphthalene (91-20-3)	
EC50 Daphnia 1	2.16 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 1	0.4 mg/l (EC50; 72 h; Skeletonema costatum)

## 12.2. Persistence and degradability

MA EPH Aliphatics Mix w/Surr		
Persistence and degradability May cause long-term adverse effects in the environment.		
hexane (110-54-3)	hexane (110-54-3)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.	
ThOD	3.52 g O₂/g substance	
naphthalene (91-20-3)		
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.	
Persistence and degradability  Biochemical oxygen demand (BOD)	, ,	

2.99 g O₂/g substance

### 12.3. Bioaccumulative potential

ThOD

MA EPH Aliphatics Mix w/Surr	
Bioaccumulative potential	Not established.
hexane (110-54-3)	
BCF fish 1	501.187 (Other, Pimephales promelas, QSAR)
Log Pow	4 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
naphthalene (91-20-3)	
BCF fish 1	23 - 168 (BCF; 8 weeks; Cyprinus carpio)
Log Pow	3.3 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

## 12.4. Mobility in soil

hexane (110-54-3)	
Surface tension	0.018 N/m (25 °C, 1 g/l)
Log Koc	3.34 (log Koc, QSAR)
Ecology - soil	Low potential for mobility in soil.

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naphthalene (91-20-3)	
Surface tension	0.03 N/m (100 °C)

#### 12.5. Other adverse effects

MA EPH Aliphatics Mix w/Surr		
hexane (110-54-3)		
naphthalene (91-20-3)		

Other information : Avoid release to the environment.

#### **SECTION 13: Disposal considerations**

Disposal methods

Product/Packaging 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.

#### **SECTION 14: Transport information**

#### **Department of Transportation (DOT)**

In accordance with DOT

Transport document description : UN1993 Flammable liquids, n.o.s. (hexane; naphthalene), 3, II

UN-No.(DOT) : UN1993

Proper Shipping Name (DOT) : Flammable liquids, n.o.s.

hexane; naphthalene

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : II - Medium Danger Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx)

DOT Packaging Bulk (49 CFR 173.xxx) : 242

**DOT Symbols** : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102)

: 202

: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

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.

TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when

the flash point of the hazardous material transported is greater than 0 C (32 F).

TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the

MAWP.

: 150

DOT Packaging Exceptions (49 CFR 173.xxx)

DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

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DOT Vessel Stowage Location : B - (i) The material may be

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

section is exceeded.

Emergency Response Guide (ERG) Number

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Other information : No supplementary information available.

#### **Transportation of Dangerous Goods**

Not applicable

#### Transport by sea

Transport document description (IMDG) : UN 1993 FLAMMABLE LIQUID, N.O.S. (hexane; naphthalene), 3, II, MARINE

POLLUTANT/ENVIRONMENTALLY HAZARDOUS

UN-No. (IMDG) : 1993

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : II - substances presenting medium danger

Limited quantities (IMDG) : 1 L

#### Air transport

Transport document description (IATA) : UN 1993 Flammable liquid, n.o.s. (hexane ; naphthalene), 3, II, ENVIRONMENTALLY

**HAZARDOUS** 

UN-No. (IATA) : 1993

Proper Shipping Name (IATA) : Flammable liquid, n.o.s.

Class (IATA) : 3 - Flammable Liquids

Packing group (IATA) : II - Medium Danger

## **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

hexane (110-54-3)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313		
Listed on EPA Hazardous Air Pollutant (HAPS)		
CERCLA RQ	5000 lb	
naphthalene (91-20-3)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		

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

Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 100 lb

## 15.2. International regulations

#### **CANADA**

## hexane (110-54-3)

Listed on the Canadian DSL (Domestic Substances List)

## naphthalene (91-20-3)

Listed on the Canadian DSL (Domestic Substances List)

## **EU-Regulations**

No additional information available

#### National regulations

#### hexane (110-54-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

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#### naphthalene (91-20-3)

Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

Listed on EPA Hazardous Air Pollutant (HAPS)

## 15.3. US State regulations

hexane (110-54-	-3)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	No	No	Yes		
naphthalene (91	1-20-3)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	5.8 μg/day	

#### **SECTION 16: Other information**

Revision date : 06/05/2020

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.

#### Full text of H-phrases:

H225	Highly flammable liquid and vapour	
H315	Causes skin irritation	
H336	May cause drowsiness or dizziness	
H350	May cause cancer	
H373	May cause damage to organs through prolonged or repeated exposure	

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