

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

1.1. Product identifier

Product form : Mixture
Product name : 8141 OP Pesticides Mix 2
Product code : AL0-101541
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. 2 H225
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Repr. 2 H361
STOT SE 3 H336
STOT RE 2 H373
Aquatic Acute 1 H400
Aquatic Chronic 2 H411

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

Repr.Cat.3; R62
F; R11
Xn; R48/20
Xi; R38
N; R51/53
R67

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) : Danger

Hazardous ingredients : hexane

Hazard statements (CLP) :

- H225 - Highly flammable liquid and vapor
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H336 - May cause drowsiness or dizziness
- H361 - Suspected of damaging fertility or the unborn child
- H373 - May cause damage to organs through prolonged or repeated exposure
- H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No 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
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302+P350 - IF ON SKIN: Gently wash with plenty of soap and water
- 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
- P308+P313 - IF exposed or concerned: 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
- P391 - Collect spillage
- P403+P235 - Store in a well-ventilated place. Keep cool

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] |
|--------------------------|---|-------|--|
| hexane (Component) | (CAS No) 110-54-3 (EC no) 203-777-6 (EC index no) 601-037-00-0 | 89.86 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 |
| acetone (Component) | (CAS No) 67-64-1 (EC no) 200-662-2 (EC index no) 606-001-00-8 | 10 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 |
| sulfotep (Component) | (CAS No) 3689-24-5 (EC no) 222-995-2 (EC index no) 015-027-00-3 | 0.02 | Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 |
| parathion (Component) | (CAS No) 56-38-2 (EC no) 200-271-7 (EC index no) 015-034-00-1 | 0.02 | Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 STOT RE 1, H372 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 |
| malathion (Component) | (CAS No) 121-75-5 (EC no) 204-497-7 (EC index no) 015-041-00-X | 0.02 | Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 |

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| Name | Product identifier | Specific concentration limits |
|-----------------------|--|-------------------------------|
| hexane (Component) | (CAS No) 110-54-3 (EC no) 203-777-6 (EC index no) 601-037-00-0 | (C >= 5) STOT RE 2, H373 |

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 | : 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. |
| 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

| | |
|--------------------------------------|--------------------------------------|
| Symptoms/injuries after inhalation | : May cause drowsiness or dizziness. |
| Symptoms/injuries after skin contact | : Causes skin irritation. |

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 | : Highly 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. 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. |

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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. |

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 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. |
| 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) | : Highly flammable liquid and vapor |
| Relative density | : No data available |
| Solubility | : No data available |
| Explosive properties | : No data available |
| 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

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

10.3. Possibility of hazardous reactions

Not established.

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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

| sulfotep (3689-24-5) | |
|-----------------------------|--------------------------|
| LD50 oral rat | 5 mg/kg (Rat) |
| LD50 dermal rabbit | 20 mg/kg (Rabbit) |
| ATE CLP (oral) | 5.000 mg/kg body weight |
| ATE CLP (dermal) | 20.000 mg/kg body weight |

| malathion (121-75-5) | |
|-----------------------------|----------------------------|
| LD50 oral rat | 290 mg/kg (Rat) |
| LD50 dermal rat | 4444 mg/kg (Rat) |
| LD50 dermal rabbit | 4100 mg/kg (Rabbit) |
| ATE CLP (oral) | 290.000 mg/kg body weight |
| ATE CLP (dermal) | 4100.000 mg/kg body weight |

| parathion (56-38-2) | |
|----------------------------|--------------------------|
| LD50 oral rat | 2 mg/kg (Rat) |
| LD50 dermal rat | 73 mg/kg (Rat) |
| LD50 dermal rabbit | 40 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | 0.03 mg/l/4h (Rat) |
| ATE CLP (oral) | 2.000 mg/kg body weight |
| ATE CLP (dermal) | 40.000 mg/kg body weight |
| ATE CLP (gases) | 100.000 ppmV/4h |
| ATE CLP (vapors) | 0.030 mg/l/4h |
| ATE CLP (dust, mist) | 0.030 mg/l/4h |

| acetone (67-64-1) | |
|----------------------------|---|
| LD50 oral rat | 5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value) |
| LD50 dermal rabbit | 20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; >7426 mg/kg bodyweight; Rabbit; Weight of evidence) |
| LC50 inhalation rat (mg/l) | 71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value) |
| LC50 inhalation rat (ppm) | 30000 ppm/4h (Rat; Experimental value) |
| ATE CLP (oral) | 5800.000 mg/kg body weight |
| ATE CLP (dermal) | 20000.000 mg/kg body weight |
| ATE CLP (gases) | 30000.000 ppmV/4h |
| ATE CLP (vapors) | 71.000 mg/l/4h |
| ATE CLP (dust, mist) | 71.000 mg/l/4h |

| hexane (110-54-3) | |
|--------------------------|--|
| LD50 oral rat | 16000 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value) |
| LD50 dermal rabbit | > 3350 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402) |
| ATE CLP (oral) | 16000.000 mg/kg body weight |

| | |
|--|--|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. 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 | : Not classified Based on available data, the classification criteria are not met May cause cancer |
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity (single exposure) | : May cause drowsiness or dizziness. |

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| | | |
|---|---|--|
| Specific target organ toxicity (repeated exposure) | : | May cause damage to organs through prolonged or repeated exposure. |
| 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. |

SECTION 12: Ecological information

12.1. Toxicity

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

| sulfotep (3689-24-5) | |
|-----------------------------|---|
| EC50 Daphnia 1 | 0.00023 mg/l (EC50; 48 h) |
| LC50 fish 2 | 0.0036 mg/l (LC50; 96 h) |
| malathion (121-75-5) | |
| EC50 Daphnia 1 | 0.0008 mg/l (EC50; 48 h) |
| LC50 fish 2 | 0.17 mg/l (LC50; 96 h) |
| parathion (56-38-2) | |
| EC50 Daphnia 1 | 0.0025 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna) |
| LC50 fish 2 | 0.75 mg/l (LC50; 96 h) |
| acetone (67-64-1) | |
| LC50 fish 2 | 5540 mg/l (LC50; EU Method C.1; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value) |
| EC50 Daphnia 2 | 12600 mg/l (LC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value) |
| hexane (110-54-3) | |
| LC50 fish 1 | 2.5 mg/l (LC50; 96 h) |
| EC50 Daphnia 1 | 2.1 mg/l (EC50; 48 h) |
| Threshold limit algae 2 | 26 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system) |

12.2. Persistence and degradability

| 8141 OP Pesticides Mix 2 | |
|---------------------------------|--|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
| malathion (121-75-5) | |
| Persistence and degradability | Biodegradable in the soil. |
| parathion (56-38-2) | |
| Persistence and degradability | Biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. |
| acetone (67-64-1) | |
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. |
| Biochemical oxygen demand (BOD) | 1.43 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 1.92 g O ₂ /g substance |
| ThOD | 2.20 g O ₂ /g substance |
| BOD (% of ThOD) | 0.872 (20 days; Literature study) |
| hexane (110-54-3) | |
| Persistence and degradability | Readily biodegradable in water. Photooxidation in water. easily degradable in the soil. |
| ThOD | 3.52 g O ₂ /g substance |
| BOD (% of ThOD) | 0.63 (Literature study) |

12.3. Bioaccumulative potential

| 8141 OP Pesticides Mix 2 | |
|---------------------------------|--|
| Bioaccumulative potential | Not established. |
| sulfotep (3689-24-5) | |
| Log Pow | 3.99 (Experimental value) |
| Bioaccumulative potential | Bioaccumable. |
| malathion (121-75-5) | |
| Log Pow | 2.36 - 2.89 |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

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| parathion (56-38-2) | |
|-------------------------------|--|
| BCF fish 1 | 335 (BCF; 912 h) |
| BCF fish 2 | 462 (BCF; 72 h) |
| BCF other aquatic organisms 1 | 240 (BCF; 999 h) |
| BCF other aquatic organisms 2 | 97 (BCF; 792 h) |
| Log Pow | 3.8 |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| acetone (67-64-1) | |
|-------------------------------|----------------------|
| BCF fish 1 | 0.69 (BCF) |
| BCF other aquatic organisms 1 | 3 (BCF; BCFWIN) |
| Log Pow | -0.24 (Test data) |
| Bioaccumulative potential | Not bioaccumulative. |

| hexane (110-54-3) | |
|---------------------------|---|
| BCF fish 1 | 501.187 (BCF; Other; Pimephales promelas) |
| Log Pow | 3.5 - 3.94 (Calculated) |
| Bioaccumulative potential | Potential for bioaccumulation (500 ≤ BCF ≤ 5000). |

12.4. Mobility in soil

| malathion (121-75-5) | |
|-----------------------------|-------------------------------------|
| Surface tension | 0.037 N/m (24 °C) |
| Ecology - soil | Toxic to bees. Not toxic to plants. |

| parathion (56-38-2) | |
|----------------------------|-------------------|
| Surface tension | 0.039 N/m (25 °C) |
| Ecology - soil | Toxic to bees. |

| acetone (67-64-1) | |
|--------------------------|------------|
| Surface tension | 0.0237 N/m |

| hexane (110-54-3) | |
|--------------------------|--|
| Surface tension | 0.018 N/m (25 °C; 1 g/l) |
| Log Koc | Koc,2187.76; QSAR; log Koc; 3.34; QSAR |

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.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 1993
UN-No.(IATA) : 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.
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S. (FLAMMABLE LIQUID, N.O.S.), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS

14.3. Packing group

Class (ADR) : 3
Classification code (ADR) : F1
Class (IATA) : 3

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Hazard labels (ADR) : 3



Hazard labels (IATA) : 3



14.4. Packing group

Packing group (ADR) : II

Packing group (IATA) : II

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

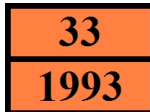
14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 33

Classification code (ADR) : F1

Orange plates :



Special provision (ADR) : 274, 601, 640D

Transport category (ADR) : 2

Tunnel restriction code (ADR) : D/E

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

CAO packing instructions (IATA) : 364

CAO max net quantity (IATA) : 60L

PCA packing instructions (IATA) : 353

PCA Limited quantities (IATA) : Y341

PCA limited quantity max net quantity (IATA) : 1L

PCA max net quantity (IATA) : 5L

PCA Excepted quantities (IATA) : E2

ERG code (IATA) : 3H

14.6.4. Inland waterway transport

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.

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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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