

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

1.1. Product identifier

Product form : Mixture
Product name : Chlorinated Herbicides
Product code : AL0-101288
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
Use of the substance/mixture : Certified reference material for laboratory 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
Acute Tox. 4 (Oral) H302
Acute Tox. 3 (Dermal) H311
Acute Tox. 4 (Inhalation) H332
Eye Irrit. 2 H319

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

F; R11
Xn; R20/21/22
Xi; R36
R44

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

GHS06

Signal word (CLP) : Danger
Hazardous ingredients : acetonitrile
Hazard statements (CLP) : H225 - Highly flammable liquid and vapor

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	H302+H332 - Harmful if swallowed or if inhaled H311 - Toxic in contact with skin H319 - Causes serious eye irritation
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection P308+P313 - IF exposed or concerned: Get medical advice/attention P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up
EUH phrases	: EUH044 - Risk of explosion if heated under confinement
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]
acetonitrile (Component)	(CAS No) 75-05-8 (EC no) 200-835-2 (EC index no) 608-001-00-3	99.84	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
dinoseb (Component) substance listed as REACH Candidate (Dinoseb (6-sec-butyl-2,4-dinitrophenol))	(CAS No) 88-85-7 (EC no) 201-861-7 (EC index no) 609-025-00-7	0.01	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Eye Irrit. 2, H319 Repr. 1B, H360D Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
2,3,4,5,6-pentachlorophenol (Component)	(CAS No) 87-86-5 (EC no) 201-778-6 (EC index no) 604-002-00-8	0.01	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

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	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
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. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

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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. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Risk of explosion if heated under confinement.

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. DO NOT fight fire when fire reaches explosives. Evacuate area.
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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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. Hazardous waste due to potential risk of explosion.
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. Keep away from sources of ignition - No smoking.
Hygiene measures : Do not eat, drink or smoke when using this product. 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 products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. 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

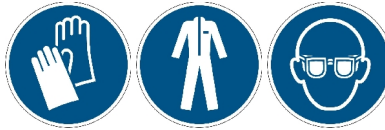
Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

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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) : Highly flammable liquid and vapor
Relative density : No data available
Solubility : No data available
Explosive properties : Risk of explosion if heated under confinement.
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

Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Risk of explosion if heated under confinement. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Toxic in contact with skin. Inhalation: Harmful if inhaled.

Chlorinated Herbicides	
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h

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Chlorinated Herbicides	
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
dinoseb (88-85-7)	
LD50 oral rat	25 - 40 mg/kg (Rat)
LD50 dermal rat	80 - 134 mg/kg (Rat)
LD50 dermal rabbit	80 mg/kg (Rabbit)
ATE CLP (oral)	25.000 mg/kg body weight
ATE CLP (dermal)	80.000 mg/kg body weight
2,3,4,5,6-pentachlorophenol (87-86-5)	
LD50 oral rat	27 mg/kg (Rat)
LD50 dermal rat	96 mg/kg (Rat)
LD50 dermal rabbit	501 mg/kg (Rabbit)
ATE CLP (oral)	27.000 mg/kg body weight
ATE CLP (dermal)	96.000 mg/kg body weight
ATE CLP (gases)	100.000 ppmV/4h
ATE CLP (vapors)	0.500 mg/l/4h
ATE CLP (dust, mist)	0.050 mg/l/4h
acetonitrile (75-05-8)	
LD50 oral rat	> 1327 mg/kg (Rat)
LD50 dermal rabbit	980 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	27 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	16000 ppm/4h (Rat)
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	980.000 mg/kg body weight
ATE CLP (gases)	16000.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
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	: 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	: Harmful if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

dinoseb (88-85-7)	
LC50 fish 1	0.08 - 0.15 mg/l (96 h; Pimephales promelas; Cool water)
EC50 other aquatic organisms 1	0.0075 mg/l (96 h; Palinurus sp.)
LC50 fish 2	0.032 mg/l (96 h; Salvelinus namaycush)
TLM fish 1	.032 - 1.4,96 h; Salvelinus namaycush
TLM fish 2	0.04 - 1.3,96 h; Salmo clarki

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dinoseb (88-85-7)	
Threshold limit algae 1	1.04 - 2.4,94 h; Algae
Threshold limit algae 2	1.3 mg/l (Scenedesmus quadricauda; pH = 7)
2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 fish 1	0.052 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	0.01 - 0.36 mg/l (48 h; Daphnia magna)
LC50 fish 2	0.45 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 2	0.41 mg/l (24 h; Daphnia pulex)
TLM fish 1	0.303 mg/l (30 h; Lepomis macrochirus)
TLM fish 2	0.22 mg/l (96 h; Carassius auratus)
Threshold limit algae 1	0.1 mg/l (96 h; Scenedesmus pannonicus)
acetonitrile (75-05-8)	
LC50 fish 1	1640 mg/l (96 h; Pimephales promelas; Soft water)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	> 1000 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	1640 mg/l (96 h; Lepomis macrochirus; Soft water)
EC50 Daphnia 2	5838 mg/l (16 h; Daphnia pulex)
TLM fish 1	1000 mg/l (96 h; Pimephales promelas; Soft water)
TLM fish 2	1650 mg/l (96 h; Poecilia reticulata; Soft water)
TLM other aquatic organisms 1	1000 ppm (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h; Pseudomonas putida)
Threshold limit other aquatic organisms 2	680 mg/l (16 h; Protozoa)
Threshold limit algae 1	9696 mg/l (72 h; Phaeodactylum; Growth rate)
Threshold limit algae 2	> 1000 mg/l (72 h; Pseudokirchneriella subcapitata; Growth rate)

12.2. Persistence and degradability

Chlorinated Herbicides	
Persistence and degradability	Not established.
dinoseb (88-85-7)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
2,3,4,5,6-pentachlorophenol (87-86-5)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
acetonitrile (75-05-8)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.17 g O ₂ /g substance
ThOD	3.12 g O ₂ /g substance
BOD (% of ThOD)	0.055 % ThOD

12.3. Bioaccumulative potential

Chlorinated Herbicides	
Bioaccumulative potential	Not established.
dinoseb (88-85-7)	
BCF fish 1	< 2.5 (Cyprinus carpio; Test duration: 6 weeks)
BCF fish 2	1 (Pisces)
Log Pow	3.09 - 4.12
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).
2,3,4,5,6-pentachlorophenol (87-86-5)	
BCF fish 1	770 (768 h; Pimephales promelas)
BCF fish 2	39 - 224 (Cyprinus carpio; Test duration: 8 weeks)
BCF other aquatic organisms 1	1250 (Algae)
Log Pow	4.07 - 5.19
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
acetonitrile (75-05-8)	
BCF other aquatic organisms 1	3.162
Log Pow	0.29 (Weight of evidence approach; Equivalent or similar to OECD 107; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

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dinoseb (88-85-7)	
Ecology - soil	Toxic to bees.
acetonitrile (75-05-8)	
Surface tension	0.029 N/m (20 °C)

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. Hazardous waste due to potential risk of explosion.
Ecology - waste materials : Hazardous waste due to toxicity. 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.
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. (acetonitrile(75-05-8)), 3, II, (D/E)

14.3. Packing group

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



Hazard labels (IATA) : 3



14.4. Packing group

Packing group (ADR) : II
Packing group (IATA) : II

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.) : 33
Classification code (ADR) : F1

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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 $\geq 0,1\%$ / SCL
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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