



3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 1.1

CLM-9917-S

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

1.1. Product identifier

Product form : Mixtures
Product name : 3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL
Product code : CLM-9917-S

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

1.2.1. Relevant identified uses

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

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: 1-703-741-5970 (24 hours)

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. 3 (Oral) | H301 |
| Acute Tox. 3 (Dermal) | H311 |
| Acute Tox. 3 (Inhalation:vapour) | H331 |
| Skin Irrit. 2 | H315 |
| Eye Irrit. 2 | H319 |
| STOT SE 1 | H370 |

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

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

F; R11
T; R23/24/25
T; R39/23/24/25
Xi; R36/37/38

Full text of R-phrases: see section 16

GHS-US classification

| | |
|----------------------------------|------|
| Flam. Liq. 2 | H225 |
| Acute Tox. 3 (Oral) | H301 |
| Acute Tox. 3 (Dermal) | H311 |
| Acute Tox. 3 (Inhalation:vapour) | H331 |
| Skin Irrit. 2 | H315 |
| Eye Irrit. 2A | H319 |
| STOT SE 1 | H370 |

Full text of H statements : see section 16

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Adverse physicochemical, human health and environmental effects

Eyes, Kidney, Liver, Heart, Central nervous system.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H370 - Causes damage to organs (eyes, kidneys, liver, heart, central nervous system) (in contact with skin, if inhaled, if swallowed)

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P260 - Do not breathe fume, mist, spray, vapors.
P264 - Wash both hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapour
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H370 - Causes damage to organs (eyes, kidneys, liver, heart, central nervous system) (Dermal, Inhalation, oral)

Precautionary statements (GHS-US)

: P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe fume, mist, spray, vapors.
P261 - Avoid breathing fume, mist, spray, vapors.
P264 - Wash Both hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P310 - If swallowed: Immediately call a poison center or doctor
P302+P352 - If on skin: Wash with plenty of water
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
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P311 - Call a poison center or doctor
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)

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P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P361 - Take off immediately all contaminated clothing.
P362 - Take off contaminated clothing and wash before reuse.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
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

| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|--|---|-----------|--|
| 100% METHANOL UNLABELED | (CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X (REACH-no) 01-2119433307-44 | 99.987359 | F; R11 T; R39/23/24/25 Xi; R36/38 |
| 3,6-DICHLOROGENIC ACID (DCGA) (RING-13C6, 99%) | (CAS-No.) 18688-01-2 (Unlabeled) | 0.013 | Xn; R22 Xi; R41 N; R51/53 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|-----------|--|
| 100% METHANOL UNLABELED | (CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X (REACH-no) 01-2119433307-44 | 99.987359 | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 1, H370 |
| 3,6-DICHLOROGENIC ACID (DCGA) (RING-13C6, 99%) | (CAS-No.) 18688-01-2 (Unlabeled) | 0.013 | Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 3, H412 |

| Name | Product identifier | % | GHS-US classification |
|-------------------------|--------------------|-----------|---|
| 100% METHANOL UNLABELED | (CAS-No.) 67-56-1 | 99.987359 | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 1, H370 |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Call a POISON CENTER or doctor/physician. |
| First-aid measures after inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician. |
| First-aid measures after skin contact | : 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 | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. |
| First-aid measures after ingestion | : Rinse mouth. Obtain emergency medical attention. Immediately call a poison center or doctor/physician. |

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

| | |
|-------------------------------------|---|
| Symptoms/effects after inhalation | : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation. |
| Symptoms/effects after eye contact | : Causes eye irritation. |
| Symptoms/effects after ingestion | : Toxic if swallowed. 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 | : For small fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. |
|------------------------------|--|

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|---|
| Fire hazard | : Highly flammable liquid and vapour. |
| Explosion hazard | : May form flammable/explosive vapor-air mixture. |
| Reactivity | : Vapors may form explosive mixture with air. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | : Wear self contained breathing apparatus for fire fighting if necessary. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information | : Use water spray to cool unopened containers. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|---|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. |
|------------------|---|

6.1.1. For non-emergency personnel

| | |
|----------------------|--|
| Emergency procedures | : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. |
|----------------------|--|

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

| | |
|-----------------|--|
| For containment | : Contain spillage, then collect with non-combustible absorbent material. Disposal should be in accordance with applicable Federal, State and local regulations. |
|-----------------|--|

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 open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. |
| Hygiene measures | : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Technical measures | : Keep container tightly closed in a cool, dry and well-ventilated place. |
| Storage conditions | : Store refrigerated (-5 C to 5 C). Protect from light. |
| Incompatible materials | : Heat sources. |

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 3,6-DICHLOROAGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL | | |
|--|---------------------------------------|--|
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm) | 200.00000000 ppm Headache. Eye damage. Danger of cutaneous absorption. |
| Italy - Portugal - USA ACGIH | ACGIH STEL (ppm) | 250 ppm Headache Eye damage. Danger of cutaneous absorption. |
| 100% METHANOL UNLABELED (67-56-1) | | |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm) | 200.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) |
| Italy - Portugal - USA ACGIH | ACGIH STEL (ppm) | 250 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) |
| Italy - Portugal - USA ACGIH | Remark (ACGIH) | Headache. Nausea. Dizziness. Eye damage. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Danger of cutaneous absorption. |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) | 260 mg/m ³ Basis: NIOSH Recommended Exposure Limits |
| USA NIOSH | NIOSH REL (TWA) (ppm) | 200 ppm Basis: NIOSH Recommended Exposure Limits |
| USA NIOSH | NIOSH REL (STEL) (mg/m ³) | 325 mg/m ³ Basis: NIOSH Recommended Exposure Limits |
| USA NIOSH | NIOSH REL (STEL) (ppm) | 250 ppm Basis: NIOSH Recommended Exposure Limits |
| USA NIOSH | Remark (NIOSH) | Potential for dermal absorption. |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 260 mg/m ³ Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| USA OSHA | OSHA PEL (TWA) (ppm) | 200 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| USA OSHA | OSHA PEL (STEL) (mg/m ³) | 325 mg/m ³ Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| USA OSHA | OSHA PEL (STEL) (ppm) | 250 ppm Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 1000 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| USA OSHA | Remark (OSHA) | The value in mg/m ³ is approximate. Skin notation. |

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Materials for protective clothing : Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Wear suitable protective clothing.

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

Environmental exposure controls : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

| | |
|---|---|
| Physical state | : Liquid |
| Appearance | : Liquid |
| Molecular mass | : 32.04 g/mol |
| Color | : Colorless |
| Odor | : Pungent |
| Odor threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : -98 °C (-144 °F) |
| Freezing point | : No data available |
| Boiling point | : 64.7 °C (148.5 °F) |
| Flash point | : 9.7 °C (49.5 °F) - closed cup |
| Auto-ignition temperature | : 455 °C (851 °F) at 1,013 hPa (760 mmHg) |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : 130.3 hPa (97.7 mmHg) at 20 °C (68 °F); 169.27 hPa (126.96 mmHg) at 25 °C (77 °F) |
| Vapor pressure at 50 °C | : 546.6 hPa (410 mmHg) at 50 °C (122 °F) |
| Relative vapor density at 20 °C | : 1.11 |
| Relative density | : No data available |
| Specific gravity / density | : 0.791 g/ml at 25 °C (77 °F) |
| Solubility | : Water: Completely miscible |
| Log Pow | : -0.77 |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Product is not explosive. |
| Oxidizing properties | : Non oxidizing material according to EC criteria. |
| Explosion limits | : 6 - 36 % (V) |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form explosive mixture with air.

10.2. Chemical stability

See storage and expiration date on CoA.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Direct sunlight.

10.5. Incompatible materials

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals. Reducing agents, Acids.

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

| | |
|--------------------|-------------------|
| LD50 oral rat | 1187 - 2769 mg/kg |
| LD50 dermal rabbit | 17100 mg/kg |

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| 3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL | |
|---|--|
| LC50 inhalation rat (mg/l) | 128.2 mg/l/4h ; 87.6 mg/l - 6 h |
| ATE CLP (oral) | 100.000 mg/kg body weight |
| ATE CLP (dermal) | 300.000 mg/kg body weight |
| ATE CLP (vapors) | 3.000 mg/l/4h |
| ATE CLP (dust, mist) | 128.200 mg/l/4h |
| LDLO, oral, human | 143 mg/kg Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

| 3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) (18688-01-2 (Unlabeled)) | |
|--|---------------------------|
| LD50 oral rat | 1039 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| ATE CLP (oral) | 500.000 mg/kg body weight |

| 100% METHANOL UNLABELED (67-56-1) | |
|-----------------------------------|--|
| LD50 oral rat | 1187 - 2769 mg/kg |
| LD50 dermal rabbit | 17100 mg/kg |
| LC50 inhalation rat (mg/l) | 128.2 mg/l/4h ; 87.6 mg/l - 6 h |
| ATE CLP (oral) | 100.000 mg/kg body weight |
| ATE CLP (dermal) | 300.000 mg/kg body weight |
| ATE CLP (vapors) | 3.000 mg/l/4h |
| ATE CLP (dust, mist) | 128.200 mg/l/4h |
| LDLO, oral, human | 143 mg/kg Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

| | |
|---|---|
| Skin corrosion/irritation | : Skin - Rabbit. Result: No skin irritation |
| Serious eye damage/irritation | : Eyes - Rabbit. Result: No eye irritation |
| Respiratory or skin sensitization | : Maximisation Test . Guinea pig. Did not cause sensitization. (OECD 406 method) |
| Germ cell mutagenicity | : AMES test : S. typhimurium. Result: negative. fibroblast. Result: Negative. Mutation in mammalian somatic cells. Mutagenicity (in vivo mammalian bone-marrow cystogenetic test, chromosomal analysis) - Mouse - male and female Result: negative. Mouse - male and female. Result: Negative |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Damage to fetus not classifiable. Fertility classification not possible from current data. |
| Specific target organ toxicity – single exposure | : Causes damage to organs through prolonged or repeated exposure Causes damage to organs |
| Specific target organ toxicity – repeated exposure | : The substance or mixture is not classified as specific target organ toxicant, repeated exposure. No data available |
| Aspiration hazard | : No aspiration toxicity classification. |
| Potential Adverse human health effects and symptoms | : 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. Effects due to Ingestion may include: Headache. Dizziness. Drowsiness. metabolic acidosis. Coma. May be fatal if swallowed and enters airways. If swallowed there is a risk of blindness. Effects on humans. stomach. |
| Symptoms/effects after inhalation | : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation. |
| Symptoms/effects after eye contact | : Causes eye irritation. |
| Symptoms/effects after ingestion | : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. |

SECTION 12: Ecological information

12.1. Toxicity

| 3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL | |
|---|---|
| LC50 fish 1 | 19000 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 Daphnia 1 | 24500 mg/l Daphnia magna (Water flea) - 48 h |

| 3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) (18688-01-2 (Unlabeled)) | |
|--|--|
| LC50 fish 1 | 28 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h |
| EC50 other aquatic organisms 1 | 96.8 mg/l Daphnia magna (Water flea) - 48 h |

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| 100% METHANOL UNLABELED (67-56-1) | |
|-----------------------------------|--|
| LC50 fish 1 | 15400 mg/l mortality LC50 - Lepomis macrochirus (Bluegill) - 96 h |
| EC50 Daphnia 1 | > 10000 mg/l Daphnia magna (Water flea) - 48 h |
| EC50 Daphnia 2 | 22000 mg/l Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 96 h |
| NOEC (acute) | 7900 mg/l Oryzias latipes - 200 h |

12.2. Persistence and degradability

| 100% METHANOL UNLABELED (67-56-1) | |
|-----------------------------------|--|
| Biochemical oxygen demand (BOD) | 600 - 1200 mg/g |
| Chemical oxygen demand (COD) | 1420 mg/g |
| ThOD | 1500 mg/g |
| Biodegradation | 72 % - rapidly biodegradable aerobic - Exposure time 5 d |

12.3. Bioaccumulative potential

| 3,6-DICHLOROAGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL | |
|--|-------|
| Log Pow | -0.77 |

| 100% METHANOL UNLABELED (67-56-1) | |
|-------------------------------------|---|
| BCF fish 1 | 5 mg/l Cyprinus carpio (Carp) - 72 d at 20 °C |
| Bioconcentration factor (BCF REACH) | 1 |
| Log Pow | -0.77 |

12.4. Mobility in soil

| 100% METHANOL UNLABELED (67-56-1) | |
|-----------------------------------|-----------------------------|
| Ecology - soil | Not degradable in the soil. |

12.5. Results of PBT and vPvB assessment

| 100% METHANOL UNLABELED (67-56-1) | |
|--|--|
| PBT: not relevant – no registration required | |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| Regional legislation (waste) | : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations. |
| 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 | : Hazardous waste due to toxicity. |

SECTION 14: Transport information

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

14.1. UN number

| | |
|-------------|--------|
| UN-No.(DOT) | : 1230 |
| DOT NA no. | UN1230 |

14.2. UN proper shipping name

| | |
|----------------------------|---|
| Proper Shipping Name (DOT) | : Methanol |
| Class (DOT) | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Hazard labels (DOT) | : 3 - Flammable liquid |



| | |
|---------------------|---|
| DOT Symbols | : D - Proper shipping name for domestic use only, or to and from Canada |
| Packing group (DOT) | : II - Medium Danger |

3,6-DICHLOROGENIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

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| | |
|---|---|
| DOT Special Provisions (49 CFR 172.102) | : 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. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 150 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 202 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 242 |

14.3. Additional information

Other information : No supplementary information available.

Overland transport

| | |
|---|---|
| Packing group (ADR) | : II |
| Class (ADR) | : 3 - Flammable liquid |
| Hazard identification number (Kemler No.) | : 336 |
| Classification code (ADR) | : FT1 |
| Hazard labels (ADR) | : 3 - Flammable liquids 6.1 - Toxic substances |



| | |
|---------------|---|
| Orange plates | : |
|---------------|---|

| | |
|-------------------------------|---------|
| Tunnel restriction code (ADR) | : D/E |
| Limited quantities (ADR) | : 1I |
| EAC | : •2WE |
| APP | : A(fl) |
| Excepted quantities (ADR) | : E2 |

Transport by sea

| | |
|-----------------------------|---|
| DOT Vessel Stowage Location | : 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. |
| DOT Vessel Stowage Other | : 40 - Stow "clear of living quarters" |
| MFAG-No | : 131 |

Air transport

| | |
|--|---------------------|
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 1 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 60 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 Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. US Federal regulations

3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

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

CERCLA RQ 5000 lb

SARA Section 302 Threshold Planning Quantity (TPQ) Not subject to reporting requirements of the United States SARA Section 302.

SARA Section 311/312 Hazard Classes
Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA Section 313 - Emission Reporting Subject to reporting requirements of United States SARA Section 313

100% METHANOL UNLABELED (67-56-1)

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

CERCLA RQ 5000 lb

SARA Section 302 Threshold Planning Quantity (TPQ) Not subject to reporting requirements of the United States SARA Section 302.

SARA Section 311/312 Hazard Classes
Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA Section 313 - Emission Reporting Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

Listed on the Canadian DSL (Domestic Substances List)

100% METHANOL UNLABELED (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

U.S. - California - Proposition 65 - Carcinogens List No

U.S. - California - Proposition 65 - Developmental Toxicity Yes

U.S. - California - Proposition 65 - Reproductive Toxicity - Female No

U.S. - California - Proposition 65 - Reproductive Toxicity - Male No

State or local regulations
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
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
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

100% METHANOL UNLABELED (67-56-1)

| | | | | |
|---|---|---|---|----------------------------------|
| 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) |
| No | Yes | No | No | |

100% METHANOL UNLABELED (67-56-1)

State or local regulations

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
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
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

SECTION 16: Other information

3,6-DICHLOROGENTISIC ACID (DCGA) (RING-13C6, 99%) 100 UG/ML IN METHANOL

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

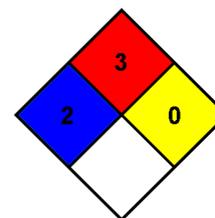
Full text of R-, H- and EUH-phrases:

| | |
|----------------------------------|--|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal) Category 3 |
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral) Category 3 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation Category 2 |
| Flam. Liq. 2 | Flammable liquids Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 1 | Specific target organ toxicity (single exposure) Category 1 |
| H225 | Highly flammable liquid and vapour |
| H301 | Toxic if swallowed |
| H302 | Harmful if swallowed |
| H311 | Toxic in contact with skin |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H370 | Causes damage to organs |
| H412 | Harmful to aquatic life with long lasting effects |
| R11 | Highly flammable |
| R22 | Harmful if swallowed |
| R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R36/38 | Irritating to eyes and skin |
| R39/23/24/25 | Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed |
| R41 | Risk of serious damage to eyes |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| F | Highly flammable |
| N | Dangerous for the environment |
| T | Toxic |
| Xi | Irritant |
| Xn | Harmful |

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 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