

Safety Data Sheet
PermaGreen™ Plus/AP (EU)



Safety Data Sheet
PermaGreen™ Plus/AP (EU)

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

1.1 Product identifier

| | |
|----------------|--|
| Product name | PermaGreen™/AP, PermaGreen™ Plus/AP (EU) |
| Product number | K059, K059-110 |
| Brand | PermaGreen™ Plus/AP |

Other means of identification

Component 1: K059C
Component 2: K059B

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

In Vitro Diagnostic Use

1.3 Details of the supplier of the safety data sheet

| | |
|-----------|--|
| Name | Diagnostic Biosystems |
| Address | 6616 Owens Drive Pleasanton CA 94588 USA |
| Telephone | (888) 896-3350 |
| email | customersupport@dbiosys.com |

1.4 Emergency telephone number

(925) 484-3350 (9AM-6PM, Monday - Friday, Pacific Standard Time)

SECTION 2: Hazards identification

General hazard statement

For Professional Users Only

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

- Acute toxicity, dermal (chapter 3.1), Cat. 3, H311
- Acute toxicity, inhalation (chapter 3.1), Cat. 3, H331
- Acute toxicity, oral (chapter 3.1), Cat. 3, H301

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

- Serious eye damage/eye irritation (chapter 3.3), Cat. 2, H319
- Specific target organ toxicity following single exposure (chapter 3.8), Cat. 1, H370
- Toxic to reproduction (chapter 3.7), Cat. 1B, H360

For the full text corresponding to the "H"-codes displayed in this section, refer to Section 16.

2.2 Label elements

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

Hazard pictograms



1. Exclamation mark;
2. Skull and crossbones;
3. Health hazard

Signal word

Danger

Hazard statements

| | |
|------|--|
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H332 | Harmful if inhaled |
| H360 | May damage fertility or the unborn child |
| H370 | Causes damage to organs |

Precautionary statements

| | |
|----------------|--|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P264 | Wash 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. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. |
| P302+P352 | IF ON SKIN: Wash with plenty of 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+P311 | IF exposed or concerned: Call a POISON CENTER/doctor. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P311 | Call a POISON CENTER/doctor. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P330 | Rinse mouth. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P361+P364 | Take off immediately all contaminated clothing and wash it before reuse. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to a licensed disposal company. |

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

2.3 Other hazards

No other hazards identified

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Component 1.

1. Methyl alcohol

Concentration 10 - 50 % (volume)

Other names / synonyms CARBINOL; COLONIAL SPIRIT; COLUMBIAN SPIRIT; Methanol; METHYL HYDROXIDE; METHYLALCOHOL; METHYLLOL; MONOHYDROXYMETHANE; NA 1230 (DOT); PYROXYLIC SPIRIT; RCRA WASTE NUMBER U154; UN 1230 (DOT); WOOD ALCOHOL; WOOD NAPHTHA; WOOD SPIRIT

EC no. 200-659-6

CAS no. 67-56-1

Index no. 603-001-00-X

- Flammable liquids (chapter 2.6), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 1

H225 Highly flammable liquid and vapor

H301 Toxic if swallowed

H311 Toxic in contact with skin

H331 Toxic if inhaled

H370 Causes damage to organs

SCLs/M-factors/ATEs *

STOT SE 1; H370: C ≥ 10 %

STOT SE 2; H371: 3 % ≤ C < 10 %

Component 2.

1. Tromethamine

Concentration < 10 % (weight)

Other names / synonyms 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-; Tris; Trometamol;

CAS no. 77-86-1

2. Methylchloroisothiazolinone

Concentration < 0.1 % (volume)

Other names / synonyms 3(2H)-Isothiazolone, 5-chloro-2-methyl-; 5-Chloro-2-methyl-2H-isothiazol-3-one; 5-chloro-2-methyl-3(2H)-isothiazolone; Proclin 300

EC no. 247-500-7

CAS no. 26172-55-4

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Sensitization - skin (chapter 3.4), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1

3. N,N-DIMETHYLFORMAMIDE

Concentration < 10 % (volume)

Other names / synonyms Formamide, N,N-dimethyl-;
EC no. 200-679-5
CAS no. 68-12-2
Index no. 616-001-00-X

- Reproductive toxicity (chapter 3.7), Cat. 1B
- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Eye damage/irritation (chapter 3.3), Cat. 2

H312 Harmful in contact with skin
H319 Causes serious eye irritation
H332 Harmful if inhaled
H360D May damage the unborn child

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|------------------------|--|
| General notes | Consult a physician. Show this safety data sheet to the doctor in attendance. |
| Following inhalation | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |
| Following skin contact | Rinse with plenty of water. Get medical attention if irritation develops and persists. |
| Following eye contact | Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur. |
| Following ingestion | Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. |

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Self-protection of the first aider

Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use extinguishing media appropriate for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Methanol: Carbon oxides

5-chloro-2-methyl-3(2H)-isothiazolone: carbon dioxide, carbon monoxide, hydrogen sulfide, nitrogen oxides, phosgene

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, 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. For personal protection see section 8.

Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

Use personal protective equipment. Avoid breathing vapours, 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. For personal protection see section 8.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 67-56-1 (EC: 200-659-6)

Methyl alcohol

ACGIH: 200 ppm TLV® inhalation; 250 ppm (ST) TLV® inhalation; Cal/OSHA: 1000 ppm PEL-C inhalation; 250 ppm PEL-ST inhalation; 200 ppm PEL-TWA inhalation; NIOSH: 250 ppm PEL-ST inhalation; 200 ppm REL-TWA inhalation; OSHA: 200 ppm, 260 mg/m³ PEL-TWA inhalation

CAS: 68-12-2

N,N-DIMETHYLFORMAMIDE

Cal/OSHA: 10 ppm PEL inhalation; NIOSH: 10 ppm REL inhalation; OSHA: 10 ppm PEL inhalation; 30 mg/m³ PEL inhalation

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Individual protection measures, such as personal protective equipment

Pictograms



Eye and face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards

No data available

Control banding approach

No data available.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--------------------|
| Physical state | Liquid |
| Appearance | Clear |
| Colour | Colorless |
| Odour | Odorless |
| Odour threshold | No data available. |
| pH | No data available. |
| Melting point/freezing point | No data available. |
| Boiling point or initial boiling point and boiling range | No data available. |
| Flash point | No data available. |
| Evaporation rate | No data available. |
| Flammability | No data available. |
| Lower and upper explosion limit/flammability limit | No data available. |
| Vapor pressure | No data available. |
| Relative vapor density | No data available. |
| Density and/or relative density | No data available. |
| Solubility | No data available. |
| Partition coefficient n-octanol/water (log value) | No data available. |
| Auto-ignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Kinematic viscosity | No data available. |
| Explosive properties | No data available. |
| Oxidizing properties | No data available. |

Particle characteristics

No data available.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

No data available.

9.2.2 Other safety characteristics

No data available.

SECTION 10: Stability and reactivity

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

10.1 Reactivity

None under normal use conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

10.5 Incompatible materials

Methanol: Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

5-chloro-2-methyl-3(2H)-isothiazolone: strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

The ATE (dermal) of the mixture is: 568.97 mg/kg bw

The ATE (gas inhalation) of the mixture is: 1357.76 ppmV

The ATE (oral) of the mixture is: 200 mg/kg bw

Methanol

LD50 Oral - Rat - 1,187 - 2,769 mg/kg

Skin corrosion/irritation

Methanol

LD50 Skin - Rabbit - 17,100 mg/kg

Serious eye damage/irritation

Risk of serious damage to eyes.

Respiratory or skin sensitization

Methanol

LD50 Inhalation - Rat - 128.2 mg/l - 4 h

Methanol

LD50 Inhalation - Rat - 87.6 mg/l - 6 h

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

Germ cell mutagenicity

Based on available data, classification data are not met

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Based on available data, classification data are not met

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

Methanol

LD50 Inhalation - Rat - 128.2 mg/l - 4 h

Methanol

LD50 Inhalation - Rat - 87.6 mg/l - 6 h

11.2 Information on other hazards

Endocrine disrupting properties

No data available.

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

5-chloro-2-methyl-3(2H)-isothiazolone

EC50 - Pseudokirchneriella subcapitata (green algae) - 0.11 - 0.16 mg/l - 72 h

5-chloro-2-methyl-3(2H)-isothiazolone

LC50 - Oncorhynchus mykiss (rainbow trout) - 1.6 mg/l - 96 h

5-chloro-2-methyl-3(2H)-isothiazolone

EC50 - Daphnia magna (water flea) - 4.7 mg/l - 48 h

Methanol

LC50 - Lepomis macrochirus (bluegill) - 15.400 mg/l - 96 h

Methanol

NOEC - Oryzias latipes - 7.900 mg/l - 200 h

Methanol

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

EC50 - Daphnia magna (water flea) - >10,000 mg/l - 48 h

Methanol

EC50 - Selenastrum capricornutum (green algae) - 22,000 mg/l - 96 h

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product disposal

Offer surplus and non-recyclable solutions to a licensed disposal company.

Packaging disposal

Dispose of as unused product.

Waste treatment

No data available

Sewage disposal

Do not let product enter drains

Other disposal recommendations

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport information

| | |
|---------------------------------|-----------------------|
| 14.1 UN Number | UN2265 |
| 14.2 UN Proper Shipping Name | N,N-Dimethylformamide |
| 14.3 Transport hazard class(es) | 3 |
| 14.4 Packing group | III |

14.5 Environmental hazards

Marine pollutant

14.6 Special precautions for user

For professional users only.

Should not be released into the environment.

Safety Data Sheet

PermaGreen™ Plus/AP (EU)

14.7 Maritime transport in bulk according to IMO instruments

Not shipped in bulk

SECTION 15: Regulatory information

15.2 Chemical Safety Assessment

The supplier of this product has not conducted any Chemical Safety Assessment

SECTION 16: Other information

Full text of hazard statements referenced in Section 2

| | |
|------|--|
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H360 | May damage fertility or the unborn child |
| H370 | Causes damage to organs |

SDS-0093, Rev. B

Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Diagnostic BioSystems be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Diagnostic BioSystems has been advised of the possibility of such damages.