

Product Name: PURTABS (ALL USE DILUTIONS)

Revision date: 29/04/2016

Supersedes: - Revision: 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance/preparation

Product Name : PURTABS (ALL USE DILUTIONS)

Synonyms : None

1.2 Use of the substance/preparation

This safety data sheet refers only to the effervescent disinfectant solution produced by PURTABS. It does not apply to the actual tablets/granules.

The solution can be used for drinking water disinfection and surface disinfection (depending on dilution).

1.3 Company/undertaking identification

Distributor : EarthSafe Chemical Alternatives

145 Wood Road, Braintree, MA 02184

Tel: 866-666-2305

e-mail: info@earthsafeca.com

1.4 US Emergency Contact Telephone Number:

CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the solution according to the Globally Harmonised System of Classification and Labelling of Chemicals, Third Revised Edition, 2009 (GHS):

Not classified for physical or health hazards at any concentration.

Not classified for environmental hazards at < 2500 ppm chlorine.

Additional Information:

Please note where the final concentration of chlorine exceeds 2500 ppm (0.25%) then the final solution is classified as Aquatic Acute 1.

2.2 Label Elements

Labelling in accordance with Globally Harmonised System of Classification and Labelling of Chemicals, Third Revised Edition, 2009 (GHS):

None.

Supplemental Hazard Statement

Please note where the final concentration of chlorine exceeds 2500 ppm (0.25%) the following apply:



Pictogram:

Word: Warning

Hazard statement: H400 Very toxic to aquatic life

Prevention statement: P273 Avoid release into the environment

Precautionary statements: P391 Collect spillage

P501 dispose of container to appropriate site

Please note that OSHA do not regulate the GHS environmental classification and the above is not required on an OSHA label.

2.3 Other Hazard Information

None



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3. COMPOSITION/INFORMATION ON INGREDIENTS.

The solution is not classified unless the amount of chlorine is > 2500 ppm, when an environmental classification is required. Please note that chlorine is formed in solution when PURTABS is dissolved in water.

| Name | Cas number | Concentration in | Classification according to GHS (self- | |
|----------------|------------|--------------------|--|--|
| | | solution | classification) | |
| Chlorine (gas) | 7782-50-5 | > 2500 ppm (> 2500 | Press.Gas | |
| | | mg/L) | Ox Gas 1: H270 | |
| | | | Skin Irrit. 2: H315 | |
| | | | Eye Irrit 2: H319 | |
| | | | Acute Tox 3: H331 | |
| | | | STOT SE 3: H335 | |
| | | | Aquatic Acute 1: H400 M=100* | |

^{*} M factor = 100 Usual cut off for acute aquatic toxicity is 25%, but this is reduced to 0.25% (2500 ppm) due to the M factor.

Full description on H statements in section 16.

4. FIRST AID MEASURES.

Inhalation: Short Term Exposure: no hazard identified

First Aid: Move person to fresh air. Call a physician if symptoms develop or persist.

Skin contact: Short Term Exposure: no hazard identified

First Aid: Wash with soap and water. Get medical attention if irritation develops and persists.

Eye contact: Short Term Exposure: Direct contact with eyes may cause temporary irritation.

<u>First Aid:</u> Rinse with water. Get medical attention if irritation develops and persists.

Ingestion: Short Term Exposure: Not a likely route of exposure. No hazard identified

First Aid: Rinse mouth. Get medical attention if symptoms occur.

Note to Physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES.

Extinguishing Media

Water fog, dry chemical powder or carbon dioxide (CO₂).

Fire-Fighting Techniques/Comments

Fire-fighters should wear full protective clothing and a self contained breathing apparatus.

Hazardous Combustion Products

Gases hazardous to health may occur.

6. ACCIDENTAL RELEASE MEASURES.

Personal Precautions

Avoid contact with skin and eyes. Wear chemical safety goggles and chemical resistant gloves. Handle product in a well-ventilated area.

Environmental Precautions

Do not release into the environment. Prevent flow of material into water source and begin monitoring available chlorine and pH immediately. Notify all downstream users of possible contamination.



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Methods for Cleaning Up

Contain spilled material. Any spillage should be cleaned up as soon as possible. Dilute further with water and flush to the sanitary sewer.

7. HANDLING AND STORAGE.

7.1 Handling

If contact is likely, safety glasses with side shields are recommended. For prolonged or repeated skin contact use suitable protective gloves. In case of insufficient ventilation, wear suitable respiratory equipment. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

7.2 Storage

Store in a closed container away from oxidising agents. Keep out of reach of children.

7.3 Handling Instructions for Specific Uses

None

8. EXPOSURE CONTROLS/PERSONAL PROTECTION.

The information below relates to pure chlorine gas, please note that under normal conditions chlorine gas is not realised from the solution in appreciable amounts. Exposure Limits:

| Components | ACGIH-TLV Data | OSHA (PEL) Data |
|--------------|---|--|
| Chlorine gas | Threshold Limit Value: 0.5 ppm, 1.5 mg/m ³ | General Industry: 1 ppm, 3 mg/m ³ ceiling |
| | Time Weighted Average: 2.9 mg/m ³ | Maritime: 1 ppm 3 mg/m ³ TWA |

Engineering controls:

General ventilation

Personal Protective Equipment:

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protectionFor prolonged or repeated skin contact use suitable protective gloves.Respiratory protectionIn case of insufficient ventilation, wear suitable respiratory equipment

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the

material and before eating, drinking, and/or smoking. Routinely wash work clothing

and protective equipment to remove contaminants.

9. Physical and Chemical Properties.

Appearance : Clear to slightly hazy
Odor : Slight chlorine odour.

Odor threshold : Not available Color : Colorless pH : 6 - 7

Boiling point/boiling range : 212 °F (100 °C)
Flash point : None to Boiling
Flammability (solid, gas) : Not applicable
Vapor pressure : Not available
Vapor density : Not available

Water solubility : Completely Soluble in Water



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Partition coefficient: n-octanol/water : Not available Evaporation rate : Not available Thermal Decomposition Temp : Not available

Specific gravity : 1.01 VOC (weight %) : 0%

10. STABILITY AND REACTIVITY.

Reactivity The product is stable and non-reactive under normal conditions of use, storage and

transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous No dangerous reaction known under conditions of normal use.

reactions

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents

Hazardous decomposition No hazardous decomposition products are known.

products

11. TOXICOLOGICAL INFORMATION.

PURTABS solution

Eye Contact: May cause temporary irritation, but not classified as an irritant

Skin: No irritation expected. Not a Potential Sensitizer

Ingestion: Expected to be a low ingestion hazard

Inhalation: No adverse effects expected.

| Toxicological Effect | Exposure Results | | |
|-----------------------------|---|--|--|
| | | | |
| Primary Skin Irritation | No data, not expected to be irritant | | |
| Primary Eye Irritation | No data, may cause temporary irritation | | |
| Acute Toxicity - Oral | $LD_{50} Rat > 5000 mg/kg$ | | |
| Acute Toxicity - Inhalation | No data, no adverse effects expected | | |
| Acute Toxicity - Dermal | LD_{50} rabbit > 5000 mg/kg | | |
| Mutagenicity | No data | | |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | | |
| Reproductive Toxicity | No data, not expected to cause reproductive or developmental effects | | |
| Sensitisation - Skin | No data | | |
| Sensitisation - Respiratory | No data | | |
| Repeated-Dose Toxicity | No data | | |

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: none identified

TARGET ORGANS: eyes, temporary irritation

12. ECOLOGICAL INFORMATION.

PURTABS solution

The solution is not classified as environmentally hazardous when the amount of chlorine is < 2500 ppm. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment



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If the solution contains > 2500 ppm chlorine then it may be acutely toxic to aquatic life

The following relates to chlorine only

| Fish Toxicity | Chlorine | |
|-----------------------|---|--|
| Rainbow trout (1) | LC ₅₀ (96 hours) 0.037 – 0.84 mg/L | |
| Invertebrate Toxicity | Sodium Dichloroisocyanurate acid | |
| Crustaceans (1) | LC ₅₀ (48 hours) 0.00203 – 4.72 mg/L | |

Persistence and degradability

biodegradable.

Based on the biodegradability data of the components, this material is expected to be

Bioaccumulative potential

This material does not contain chemicals that have known bioaccumulative potential.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone

creation potential, endocrine disruption, global warming potential) are expected from this component

13. DISPOSAL CONSIDERATIONS.

Disposal instructions Diluted products can be flushed to the sanitary sewer.

Hazardous waste code Not assigned.

Waste from residues / unused products Dispose of in accordance with local regulations

Contaminated packaging Rinse unusable containers before recycling or disposal as trash to remove any product

residue.

14. TRANSPORT INFORMATION.

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION.

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA (Superfund) reportable quantity

Not listed.

Superfund Amendments and Reauthorization $Act\ of\ 1986\ (SARA)$

Hazard categories Immediate Hazard – No

Delayed Hazard – No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely

No

 $haz ardous\ substance$

SARA 311/312 Hazardous

No

chemical



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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.Safe

Drinking Water Act Not regulated

(SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|--------------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION.

Further information

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).



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DANGER CORROSIVE

Causes Irreversible eye damage. Harmful if swallowed, inhaled, or absorbed through

skin.

Disclaimer The information in the sheet was written based on the best knowledge and experience

currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe

handling, use, processing, storage, transportation, disposal, and release.

References

(1) GESTIS Substance Database (http://gestis-

en.itrust.de/nxt/gateway.dll?f=templates\$fn=default.htm\$vid=gestiseng:sdbeng\$3.0)

GHS Classification used in Section 3

Ox Gas 1: H270 May cause or intensify fire; oxidiser

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit 2: H319- Causes serious eye irritation

Acute Tox 3: H331 Toxic if inhaled

STOT SE 3: H335 May cause respiratory irritation Aquatic Acute 1: H400 Very toxic to aquatic life

REVISION NO: 0 ISSUE DATE 29/04/2016

REVISION HISTORY:

Revision No. 0- New SDS required for PURTABS In-Use dilutions