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 "*" alterations as compared to previous version; n.ap. = not applicable; n.av. = not available

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

1.1 Product identifier

Trade Name: AquaScreen® FastExtract Kit, Wash Buffer 1
Article – No.: 32-1010, 32-1050
Index number: n.ap.
EG number: n.ap.
CAS number: n.ap.
Registration number: n.ap.

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

Uses advised against: No further relevant information available.
 Other non-specified industry: Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

1.3.1 Address of the Company / Supplier:

Minerva Biolabs GmbH, Köpenicker Straße 325, D- 12555 Berlin
 Telephone: +49 30 - 2000 437-0, Telefax: +49 30-2000 437-9, E-Mail: info@minerva-biolabs.com

1.3.2 Responsible for the data sheet:

info@minerva-biolabs.com

1.4 Emergency telephone number

Emergency - Telephone of Company / Undertaking
 Telephone: +49 30-2000 437-0 (08:30 – 16:30)

Information Centre Specializing in Symptoms of
 Poisoning
 Telephone: +44 870 600 6266

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Mixture
Classification and labelling according to directive 1272/2008/EC:
 Acute Tox. 4, H302
 Skin Corr. 1B, H314
 Eye Dam. 1, H318
 Aquatic Chronic 3, H412

2.2 Label elements

Classification according to 1272/2008/EC: Yes.
 Applicable Exemptions: No.
 Signal word(s): Danger
 Component(s):

Contains: Guanidinium thiocyanate

Hazard pictogram(s):



Hazard statements (H-Phrases):

H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements (P-Phrases):

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional Information:

EUH032 Contact with acids liberates very toxic gas.

The above mentioned labelling is valid for distribution to industrial user.

2.3 Other Hazards

This mixture contains no substances which are assessed to be PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

n.ap.

3.2 Mixtures

| Product/ingredient name | | H-Phrases | m%-range |
|-------------------------|----------|--|----------|
| Cas – No. | EC – No. | | |
| 593-84-0 | 209-84-0 | Acute Tox. 4, H302/312/332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412 | 25-50 |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8. Text of H - phrases: see section 16.

Chemical Characterization:

n.ap.

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 Inhalation:

Take the affected person to fresh air. Do not leave affected person unattended. Consult doctor in case of complaints.

4.1.2 Skin Contact:

Immediately wash with water and soap and rinse thoroughly. Call a doctor immediately.

4.1.3 Eye Contact:

Rinse opened eye for several minutes under running water. Call a doctor immediately.

4.1.4 Ingestion:

Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects:

Eye Contact: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Skin Contact: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

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Over-exposure signs/symptoms:

- Eye Contact:** No specific data.
- Inhalation:** No specific data.
- Skin Contact:** No specific data.
- Ingestion:** No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician:

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific Treatments:

No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable Extinguishing Media:

CO₂, powder or water spray. Use an extinguishing agent suitable for the surrounding fire.

5.1.2 Extinguishing Media to Avoid:

Water with full jet.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

5.3.1 Special Protective Equipment:

Do not inhale explosion or combustion gases.

5.3.2 Additional Information:

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing. Use respiratory protective device against the effects of fume/dust/aerosol.

6.1.1 For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

6.1.2 For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "6.1.1 For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

6.3.1 Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.3.2 Large spill

Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 7 for information on safe handling.

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See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1.1 Precautions for Safe Handling:

Ensure good interior ventilation, especially at floor level (Fumes are heavier than air). Store in cool, dry place in tightly closed receptacles. Do not ingest. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. Avoid contact with skin and eyes. Put on appropriate personal protective equipment (see Section 8). Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.1.2 Precautions in Case of Fire and Explosion:

Keep ignition sources away - Do not smoke. Fumes can combine with air to form an explosive mixture. Flammable gas-air mixtures may form in empty receptacles. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

7.2.1 Storage Instructions:

Storage temperature: Ambient Temperature. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (acids) (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.2.2 Store away from:

Store away from acids (see section 10) and food and drink.

7.2.3 Further Information on Storage Conditions:

Keep container tightly sealed. Store receptacle in a well ventilated area.

7.3 Specific end use(s)

n.av.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| | |
|-----------------|--------------------|
| Material | Limit Value |
|-----------------|--------------------|

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8.2.2 Individual protection measures

8.2.2a Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2b Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

8.2.2c Hand protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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8.2.2d Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.

8.2.2e Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8.2.2f Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8.2.2g Further Information:

Observe wearing time limits.

8.2.3 Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | | | |
|--------|---|---|---|
| 9.1.1 | Physical state: Fluid | Colour: Clear | Odour: Characteristic Odour threshold: n.av. |
| 9.1.2 | pH-value, undiluted (20°C): | 7.5 | |
| 9.1.3 | pH-value, 1% aqueous solution: | n.av. | |
| 9.1.4 | Melting point / freezing point (°C): | n.av. | |
| 9.1.5 | Boiling point / Boiling - range (°C): | 100 | |
| 9.1.6 | Flash point (°C): | n. ap. | |
| 9.1.7 | Evaporation rate: | n.av. | |
| 9.1.8 | Flammability (EEC A10/A13): | n.av. | |
| 9.1.9 | Ignition temperature (°C): | n.av. | |
| 9.1.10 | Autoflammability (EEC A16): | Product is not self-igniting. | |
| 9.1.11 | Explosion hazard: | Product does not present an explosion hazard. | |
| 9.1.12 | Oxidising properties: | n.av. | |
| 9.1.13 | Explosion limits (Vol.%) lower/upper: | n.av. / n.av. | |
| 9.1.14 | Vapour pressure (20°C): | 23 hPa | |
| 9.1.15 | Vapour density (Air = 1): | n.av. | |
| 9.1.16 | Density (g/ml): | n.av. | |
| 9.1.17 | Solubility (in Water): | Soluble | |
| 9.1.18 | Partition coefficient, n-Octanol / Water: | n.av. | |
| 9.1.19 | Viscosity: | n.av. | |
| 9.1.20 | Solvent content (m %): | n.av. | |
| 9.1.21 | Thermal decomposition (°C): | n.av. | |
| 9.1.22 | Evaporation rate: | n.av. | |
| 9.2 | Other information | n.av. | |

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable under the recommended application and storage conditions.

10.3 Possibility of hazardous reactions

Contact with acids releases toxic gases.

10.4 Conditions to avoid

Handle in accordance with good industrial hygiene and safety practice.

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10.5 **Incompatible materials**

No specific data.

10.6 **Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Contact with acids releases toxic gases/vapors.

SECTION 11: Toxicological information

11.1 **Information on toxicological effects**

Acute Health Effects: Harmful if swallowed

593-84-0 Guanidinium thiocyanate

Oral: LD50 593 mg/kg (rat)

Skin corrosion / irritation: n.av.
 Serious eye damage / irritation: n.av.
 Respiratory or skin sensitisation: n.av.
 Germ cell mutagenicity: n.av.
 Carcinogenicity: n.av.
 Reproductive toxicity: n.av.

Specific target organ toxicity
 (single exposure):

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|----------|-------------------|---------------|
| | | | |

Specific target organ toxicity
 (repeated exposure): n.av.
 Aspiration hazard: n.av.

11.1.1 – **Practical Experience**

11.1.11 n.av.

11.1.12 Practical Experience

Observations relevant for classification:

None.

Further Observations:

None.

Classification of the preparation has been done by calculation in accordance with EEC directives.

11.2 **Information on the likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation.

11.3 **Potential acute health effects**

Inhalation: No known significant effects or critical hazards.

Ingestion: Irritating to mouth, throat and stomach.

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

11.4 **Symptoms related to the physical, chemical and toxicological characteristics**

Inhalation:

Adverse symptoms may include the following:

No specific data.

Ingestion:

Adverse symptoms may include the following:

No specific data.

Skin contact:

Adverse symptoms may include the following:

irritation

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redness

Eye contact:

Adverse symptoms may include the following:

pain or irritation

watering

redness

11.5 Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: n.av.

Potential delayed effects: n.av.

Long term exposure

Potential immediate effects: n.av.

Potential delayed effects: n.av.

Potential chronic health effects: n.av.

11.6 Conclusion/Summary

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Other information: n.av.

SECTION 12: Ecological information

12.1 Toxicity

n.av.

12.2 Persistence and degradability

n.av.

12.3 Bioaccumulative potential

n.av.

12.4 Mobility in soil

n.av.

Additional ecological information:

General notes:

Water hazard class 2 (German regulation) (Self-assessment): Hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment

This mixture contains no substances which are assessed to be PBT or vPvB.

12.6 Other adverse effects

12.6.1 COD-Value, mg/g: n.av.

12.6.2 BOD5-Value, mg/g: n.av.

12.6.3 AOX-Remarks: n.ap.

12.6.4 Significant Components: None.

12.6.5 Other adverse effects: n.ap.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

13.1.1 Product methods of disposal

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the

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proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

13.1.2 Packaging methods of disposal

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

13.2 Contaminated Packaging

Recommendation: n.av.

Safe Handling: as described under 13.1.1




13.2.3 Waste - Code - No.

n.av.

13.3 Special precautions

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR | IMDG | IATA |
|------|---|--|--|
| 14.1 | UN number | | |
| | UN1760 | UN1760 | UN1760 |
| 14.2 | UN proper shipping name | | |
| | 1760 CORROSIVE LIQUID, N.O.S. (guanidinium thiocyanate) | 1760 CORROSIVE LIQUID, N.O.S. (guanidinium thiocyanate) | Corrosive liquids, n.o.s. (guanidinium thiocyanate) |
| 14.3 | Transport hazard class(es) | | |
| |  Class: 8 Corrosive substances Label: 8 |  Class: 8 Corrosive substances Label: 8 |  Class: 8 Corrosive substances Label: 8 |
| 14.4 | Packing group | | |
| | III | III | III |
| 14.5 | Environmental hazards | | |
| | No | No | No |
| 14.6 | Special precautions for user | | |
| | Warning: Corrosive substances. Danger code (Kemler): 80 EMS Number: F-A, S-B | Warning: Corrosive substances. Stowage category: A Stowage code: SW2 Clear of living quarters. | Warning: Corrosive substances. |
| 14.7 | Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | | |
| | | None. | |
| 14.8 | Transport/Additional information | | |
| | Transport category: 2 LQ 5L Tunnel restriction code: E UN „Model Regulation“: 1760 CORROSIVE LIQUID, N.O.S. (GUANIDINIUM THIOCYANATE), 8, III | | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations, limitations and prohibitive regulations:

None.

15.2 Chemical safety assessment:

None.

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**SECTION 16: Other information****16.1 Abbreviations and acronyms**

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

16.2 Full text of hazard and/or precautionary statements from section 2 to 15**16.2.1 Full text of abbreviated H statements**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

16.2.2 Full text of classifications [CLP/GHS]

Acute Tox. 4, H302 Harmful if swallowed – Category 4

Acute Tox. 4, H312 Harmful in contact with skin – Category 4

Skin Corr. 1B, H314 Causes severe skin burns and eye damage – Category 1B

Acute Tox. 4, H332 Harmful if inhaled – Category 4

Aquatic Chronic 3, H412 Harmful to aquatic life with long lasting effects – Category 3

16.3 Other

This datasheet has been compiled in accordance with EU regulation 2015/830. The statements in this Material Safety Data Sheet were made to the best of our knowledge and are as accurate as possible. They are given for information only. They do not constitute a contractual guarantee of a product's properties. They must neither be altered nor transferred to other products.

16.4 Notice to reader

The statements contained herein are based upon technical data that Minerva Biolabs GmbH believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. Minerva Biolabs GmbH MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.