

Section 1. Identification

GHS product identifier

Product Name 0247 Microbiocide / AM-515

Product type Industrial water treatment product

Emergency telephone number Emergency telephone number: CHEMTREC (800) 424-9300 Poison Control: 1-800-222-1222

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

See label and/or technical data sheet, if available.

Section 2. Hazards identification

ACUTE TOXICITY (oral) - Category 3

ACUTE TOXICITY (inhalation) - Category 2

SKIN CORROSION/IRRITATION - Category 1B

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

RESPIRATORY SENSITIZATION - Category 1

SKIN SENSITIZATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Classification of the substance or mixture :

Signal word : Danger

Hazard statements : Fatal if inhaled.

Toxic if swallowed.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

Hazard pictograms :

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a

well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard(29 CFR 1910.1200).

Section 2. Hazards identification

Response : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

Safety Data Sheet for **0247 microbiocide / AM-515**

Rev 0 Feb 2016

Page 1 of 10



Section 3. Composition/information on ingredients

Ingredient name Glutaraldehyde 15% CAS # 111-30-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Other means of identification: Biocides

Substance/mixture: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

Per Appendix D 1919.1200 OSHA, ranges can be used when there is batch-to-batch variability in a mixture or a trade secret claim.

Section 4. First aid measures

Description of necessary first aid measures

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

- Call poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water, if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for further treatment advice.
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

Section 4. First aid measures

Eye contact Hold eye open and rinse slowly and gently with water for 15-20 minutes.

- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for further treatment advice.

Skin contact

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Inhalation

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

Ingestion

- Call poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water, if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None Known

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 6. Accidental release measures

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 spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised 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 "For nonemergency personnel

Environmental precautions Avoid dispersal of spilled 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). Water polluting material. May be harmful to the environment if released in large quantities

Personal precautions, protective equipment and emergency procedures Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

:

Large spill :

Avoid dispersal of spilled 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). Water polluting material. May be harmful to the environment if released in large quantities.

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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygienemeasures.

Conditions for safe storage, including any incompatibilities

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 (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.

Satisfactory Materials of Construction : Not available.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name Glutaraldehyde **ACGIH (United States).**

Exposure limits CEIL: 0.2 mg/m³
CEIL: 0.05 ppm
ACGIH TLV (United States, 4/2014). Skin sensitizer.
C: 0.05 ppm
OSHA PEL 1989 (United States, 3/1989).
CEIL: 0.2 ppm
CEIL: 0.8 mg/m³

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.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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 contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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.

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.

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.

Section 9. Physical and chemical properties

Physical state Liquid. [Colorless to light yellow.]

Odor Characteristic.

Color Colorless to light yellow.

pH 3.1 to 4.5

Melting point -17°C (1.4°F)

Boiling point : 100.7°C (213.3°F)

Flash point Closed cup: >100°C (>212°F) [Pensky-Martens.]

Evaporation rate 1 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits: Not available.

Vapor pressure 0.04 kPa (0.3 mm Hg) [room temperature]

Relative density 1.12

Vapor density Not available.

Solubility Easily soluble in the following materials: cold water and hot water.

Dispersibility properties : Not available.

Partition coefficient: noctanol/ water Not available.

Odor threshold <1 ppm

Section 9. Physical and chemical properties

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

Auto-ignition temperature Not available.

Viscosity Not available.

Decomposition temperature : Not available.

VOC : Not available.

Section 10. Stability and reactivity

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

Chemical stability The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid No specific data.

Incompatible materials : No specific data.

Hazardous decomposition Products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Glutaraldehyde
Result	LD50 Oral Mouse 100 mg/kg - LD50 Oral Rat 134 mg/kg - LD50 Oral Rat 134 mg/kg -

Sensitization	Glutaraldehyde skin Rabbit Sensitizing Respiratory Rat Sensitizing
----------------------	---

Mutagenicity Not available.

Conclusion/Summary : For glutaraldehyde: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

Carcinogenicity

This product has not been tested unless noted in summary results.

Conclusion/Summary : Not tested, data based on 50% aqueous solution.

In a NTP chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. An increase in large granular lymphocytes in Fischer rats dosed with glutaraldehyde for two years was random or a secondary carcinogenic effect due to a modifying influence on the occurrence of this common neoplasm in this rat strain.

Reproductive toxicity Not available.

Conclusion/Summary : For glutaraldehyde: In animal studies, did not interfere with reproduction.

Teratogenicity Not available.

Conclusion/Summary : For glutaraldehyde: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Specific target organ toxicity (single exposure)

Glutaraldehyde Category 3 Not applicable. Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard Not available.

Information on the likely routes of exposure

: Routes of entry anticipated: Dermal, Inhalation.

Routes of entry not anticipated: Oral.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Fatal if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingestion : Toxic if swallowed.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

- pain
- watering
- redness

Inhalation Adverse symptoms may include the following:

- respiratory tract irritation
- coughing
- wheezing and breathing difficulties asthma

Skin contact Adverse symptoms may include the following:

- pain or irritation
- redness

blistering may occur

Ingestion Adverse symptoms may include the following:
stomach pains

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

Short term exposure

Potential immediate effects Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects : Not available.

Potential chronic health effects Not available.

General :Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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.

Numerical measures of toxicity

Oral ATE 297.8 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name Result Species Exposure

DIALD 45 Acute EC50 2.64 mg/l Algae 96 hours

Acute EC50 0.69 mg/l Daphnia 48 hours

Acute LC50 10.8 mg/l Fish 96 hours

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal methods :

RCRA classification : When disposed of, this product may be regulated as a RCRA Hazardous Waste with the characteristics of corrosivity.

Date of issue/Date of revision : 5/26/2015. **Date of previous issue** : No previous validation. **Version** : 0.01 8/12
DIALD 45

Section 14. Transport information

DOT

CORROSIVE LIQUID, TOXIC,

N.O.S. (glutaral, solution)

Safety Data Sheet for **0247 microbiocide / AM-515**

8
II
Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

: Not available.

Section 15. Regulatory information

U.S. Federal regulations :

SARA 302/304

SARA 304 RQ : Not applicable.

No products were found.

Composition/information on ingredients

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

United States inventory (TSCA 8b):This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from US Toxic Substances Control Act (TSCA) Inventory listing requirements.

Potential impurities present in trace quantities are included in the regulatory listings of this section.

Date of issue/Date of revision : 5/26/2015. **Date of previous issue :** No previous validation. **Version :** 0.01 9/12
DIALD 45

Section 15. Regulatory information

CERCLA: Hazardous substances.: No products were found.

This product is allowed under the following FDA (21 CFR) sections :173.320 (Limitation: as a single additive in beet-sugar mills at a level not higher than 250 ppm); 175.105; 176.170 & 176.180 (Limitation: as an antimicrobial agent in pigment and filler slurries used in the manufacture of paper and paperboard at levels not to exceed 300 parts per million by weight of the slurry solids.); 176.300.

1448-421

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling 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 nonpesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Corrosive. May be fatal if swallowed. Causes irreversible eye damage. Causes skin burns. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if inhaled. Causes asthmatic signs and symptoms in hyper-reactive individuals. Do not swallow. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor. Wear goggles, protective clothing, and butyl or nitrile gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

EPA Reg. No. :

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Safety Data Sheet for **0247 microbiocide / AM-515**

3
1
0

National Fire Protection Association (U.S.A.)

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue/Date of revision : 5/26/2015. Date of previous issue : No previous validation. Version : 0.01 10/12

DIALD 45

Section 16. Other information

5/26/2015.

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Buckman Laboratories, Inc. warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use outside of such directions.

Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty.

The exclusive remedy against seller shall be in a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort.

Any controversy or claim arising out or relating to this contract, or breach thereof, shall be settle by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon

Notice to reader

Date of previous issue

:
:
:
:
:
:

Indicates information that has changed from previously issued version.

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

5/26/2015.

No previous validation.

0.01

0

1

Health 3

Special

Instability/Reactivity

Flammability

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue/Date of revision : 5/26/2015. *Date of previous issue* : No previous validation. *Version* : 0.01 11/12

DIALD 45

Section 16. Other information

the rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

Date of issue/Date of revision : 5/26/2015. *Date of previous issue* : No previous validation. *Version* : 0.01 12/12