

AQUA ARMOR D+ — AQUACULTURE POND DISINFECTANT

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

AQUA ARMOR D+ – AQUACULTURE POND DISINFECTANT
Formulated Oxidizing Biocide Blend for Aquaculture Pond Water Treatment

CAS: Proprietary blend – a formulated oxidizing disinfectant composition for aquaculture pond preparation; exact composition and active ingredient ratios are manufacturer-proprietary and available on request via Certificate of Analysis.

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Pond bottom/water disinfection in shrimp and fish aquaculture farming, applied prior to stocking as part of pond preparation, at manufacturer-recommended dosing. For industrial/agricultural user only.
Uses advised against: Not for direct application to actively stocked ponds. All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on general data available for formulated oxidizing biocide products of this class used in aquaculture pond preparation. Exact quantitative classification for this specific proprietary formulation is available on request from the manufacturer.

Ox. Sol. 3 (typical for this product class)	Oxidizing solid/liquid, Category 3, H272 – class-typical, confirm against current manufacturer label
Skin Irrit. 2	Skin irritation, Category 2, H315
Eye Irrit. 2	Eye irritation, Category 2, H319
Aquatic Acute 1	Hazardous to the aquatic environment, acute hazard, Category 1, H400

The classification table above reflects general hazard characteristics typical of formulated oxidizing biocide/disinfectant blends used for aquaculture pond preparation. The definitive classification of this specific batch is set by Suraj Chemicals' manufacturer/formulator and is available on request.

2.2 GHS label elements, including precautionary statements:

GHS: Warning (class-typical; refer to current product label)

Hazard statements:

H272: May intensify fire; oxidizer.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic life.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220: Keep away from clothing and other combustible materials.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

Although intended for use in aquaculture, the concentrated (as-supplied) product is toxic to fish, shrimp and other aquatic life; ponds must be fully treated, reacted and flushed/diluted per the manufacturer's dosing programme before restocking. Not a PBT/vPvB substance based on available information.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures:

Chemical description: Formulated oxidizing biocide blend for aquaculture pond disinfection (proprietary composition).

Identification	Chemical Name / Classification	Concentration
Proprietary	Oxidizing biocide active ingredient(s) (specific active(s) and formulation available on request) – Ox. Sol. 3 H272; Skin Irrit. 2 H315; Eye Irrit. 2 H319; Aquatic Acute 1 H400	Available on request (proprietary formulation)
Proprietary	Carrier/excipients – Not classified	Balance

Full quantitative composition is proprietary to the manufacturer/formulator and is available on request via Certificate of Analysis. To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance immediately, showing the SDS of this product, if symptoms occur or persist.

By inhalation:
Remove the person affected to fresh air and keep at rest. Seek medical attention if breathing difficulty occurs.

By skin contact:
Remove contaminated clothing. Wash skin thoroughly with plenty of water and soap. Seek medical attention if irritation persists.

By eye contact:
Rinse eyes thoroughly with lukewarm water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention.

By ingestion/aspiration:
Rinse mouth with water. Do not induce vomiting. Give water to drink if the person is conscious. Seek medical advice.

4.2 Most important symptoms/effects, acute and delayed:
Skin and eye irritation. See sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:
Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:
Suitable: Flood with large quantities of water; use extinguishing media appropriate to the surrounding fire.
Unsuitable: Media unsuitable for oxidizer-fed fires (consult manufacturer's specific guidance)

5.2 Specific hazards arising from the chemical:
May be an oxidizing formulation – contact with combustible/organic materials may intensify fire. Consult manufacturer's specific technical data sheet for this proprietary blend for detailed fire behaviour.

5.3 Special protective actions for fire-fighters:
Wear self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
For non-emergency personnel:
Avoid contact with skin and eyes. Use PPE per Section 8.

For emergency responders:
Wear protective equipment. Ventilate the area.

6.2 Environmental precautions:
Prevent entry into drains, watercourses and soil in concentrated form – very toxic to aquatic life prior to dilution/reaction.

6.3 Methods and materials for containment and cleaning up:
Contain spill and collect into a labelled container for disposal, following the manufacturer's specific spill guidance for this formulation. Do not flush concentrated product to drain or open water.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A. General precautions for safe use:
Avoid contact with eyes and skin. Follow the manufacturer's recommended pond-dosing programme; do not exceed recommended concentrations.

B. Technical recommendations for the prevention of fires and explosions:
Keep away from combustible materials and ignition sources if the product is oxidizing in nature; consult manufacturer's specific technical data sheet.

C. Technical recommendations on general occupational hygiene:
Do not eat, drink or smoke while handling. Wash hands after handling.

D. Technical recommendations to prevent environmental risks:
Do not discharge concentrated product to natural water bodies. Follow local aquaculture/fisheries department guidance on pond effluent management.

7.2 Conditions for safe storage, including any incompatibilities:
A. Specific storage requirements:

Minimum Temp.	5°C
Maximum Temp.	30°C
Maximum time (unopened, original packaging)	12 Months (typical for this product class – confirm against current manufacturer label)

B. General conditions for storage:
Store in tightly closed original packaging, in a cool, dry, well-ventilated place, away from direct sunlight and incompatible materials.

7.3 Specific end use(s):
Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
No specific occupational exposure limit is established for this proprietary formulated blend under the Factories Act, 1948. Follow control parameters applicable to the confirmed active ingredient(s), available on request.

8.2 Appropriate engineering controls:
Use adequate ventilation during handling and pond application. Consult manufacturer's leaflet for storage, use, cleaning and maintenance of PPE.

B. Respiratory protection:
Dust/particulate or vapour respirator as appropriate to the product form, where ventilation is inadequate.

C. Specific protection for the hands:
Chemical-resistant gloves (nitrile or PVC).

D. Eye and face protection:
Chemical splash goggles.

E. Bodily protection:
Standard work clothing/coveralls; waterproof boots for pond application.

F. Additional emergency measures:
Eyewash station and washing facilities should be available.

Environmental exposure controls:
Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Solid (powder/granules) – confirm exact form against current manufacturer label
Appearance	Free-flowing powder/granules
Color	Available on request
Odor	Available on request
Odour threshold	Not relevant *
Volatility	
Boiling point at atmospheric pressure	Non-applicable (solid)
Vapour pressure at 20°C / 50°C	Not relevant *
Evaporation rate at 20°C	Not relevant *
Product Description	
Density / Relative density at 20°C	Available on request
Dynamic / Kinematic viscosity	Non-applicable (solid)
Concentration	Proprietary formulation – available on request
pH (1% aqueous solution)	Available on request
Vapour density at 20°C	Not relevant *
Partition coefficient n-octanol/water 20°C	Not relevant (inorganic/salt-based formulation, typical)
Solubility in water at 20°C	Soluble (product is designed for aqueous pond dosing)
Decomposition temperature	Available on request
Melting point/freezing point	Not established for this grade
Flammability	
Flash Point	Non-applicable (solid)
Flammability (solid, gas)	Not readily flammable; may be oxidizing (see section 2)
Autoignition temperature	Not relevant *
Lower / Upper flammability limit	Not relevant *
Particle Characteristics	
Median equivalent diameter	Available on request

* Not relevant due to the nature of the product, not providing information on the properties of its hazards.

9.2 Other information:

Explosive properties	Not expected to be explosive; confirm against manufacturer's data
Oxidising properties	May be oxidizing – see section 2
Corrosive to metals	Available on request
Heat of combustion	Not relevant *
Surface tension at 20°C	Not relevant *
Refraction index	Not relevant *

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

May react with combustible/organic materials, reducing agents and acids, consistent with an oxidizing formulation. Consult manufacturer's specific technical data sheet for confirmed reactivity data.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Contamination with organic matter, acids or reducing agents may cause a hazardous exothermic reaction, consistent with an oxidizing formulation.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid prolonged high heat	Avoid prolonged direct exposure	Avoid moisture ingress (caking/premature reaction)

10.5 Incompatible materials:

Acids	Organic / Combustible Materials	Reducing Agents
Avoid contact	Avoid contact	Avoid contact

10.6 Hazardous decomposition products:

Available on request; consult manufacturer's specific technical data sheet.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Quantitative endpoint data specific to this proprietary formulation is not published – Available on request. General class data for formulated oxidizing biocide/disinfectant blends indicates the following typical effects:

A. Ingestion (acute effect):

May cause gastrointestinal irritation if swallowed.

B. Inhalation (acute effect):

Dust/mist may cause irritation of the respiratory tract.

C. Contact with skin and eyes (acute effect):

Causes skin irritation. Causes serious eye irritation.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data.

E. Sensitizing effects:

Classification criteria for respiratory or skin sensitisation are not met based on available data.

F. Specific target organ toxicity (STOT) – single exposure:

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data.

H. Aspiration hazard:

Classification criteria are not met based on available data.

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Formulated product	Oral LD50: Available on request (not published for this specific formulation)	Rat

SECTION 12: ECOLOGICAL INFORMATION

Very toxic to aquatic life in concentrated (as-supplied) form – this is expected and intentional for its function as a pond disinfectant, and toxicity is managed through controlled dosing, reaction time and dilution before restocking, per the manufacturer's programme.

12.1 Toxicity:

Quantitative aquatic toxicity data specific to this formulation is not published – Available on request. As an oxidizing biocide intended to eliminate pathogens, parasites and unwanted organisms in pond water/sediment prior to stocking, the concentrated product is inherently toxic to aquatic life including target and non-target fish/shrimp species.

12.2 Persistence and degradability:

Expected to react/degrade relatively rapidly in pond water and sediment, consistent with its function as a reactive oxidizing disinfectant; residual activity dissipates over the manufacturer's recommended withholding period before restocking.

12.3 Bioaccumulative potential:

Not expected to bioaccumulate based on general class data for this type of formulation.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not relevant	Not relevant	Available on request	Reacts with sediment organic matter

12.5 Results of PBT and vPvB assessment:

Not expected to meet PBT/vPvB criteria based on available information.

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Use strictly per the manufacturer's recommended pond-dosing programme; do not discharge undiluted/unreacted product to natural water bodies. Excess/off-spec material should be disposed of as per local industrial waste regulations, or handled by a licensed waste contractor for larger quantities.

Refer to national and local regulations on waste management, and applicable fisheries/aquaculture/pollution control board guidance.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Available on request – classification/UN number for this specific proprietary formulation should be confirmed against the manufacturer's current transport documentation
14.2 UN proper shipping name	Available on request
14.3 Transport hazard class(es)	Available on request – likely Class 5.1 (oxidizer) if the classification in Section 2 is confirmed, otherwise Non-applicable
14.4 Packing group	Available on request
14.5 Environmental hazard	Yes (based on Aquatic Acute 1 classification, section 2)
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Available on request
14.2 UN proper shipping name	Available on request
14.3 Transport hazard class(es)	Available on request
14.4 Packing group	Available on request
14.5 Marine pollutant	Yes
14.6 Special precautions for user	Available on request
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Available on request
14.2 UN proper shipping name	Available on request
14.3 Transport hazard class(es)	Available on request
14.4 Packing group	Available on request
14.5 Environmental hazard	Yes
14.6 Special precautions for user	Consult current IATA regulations for packing instruction limits
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (India)
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Coastal Aquaculture Authority Act, 2005 (India) – applicable to aquaculture chemical inputs

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

- H272: May intensify fire; oxidizer.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H400: Very toxic to aquatic life.

The phrases indicated reflect general class-typical hazards for formulated oxidizing biocide/disinfectant blends used in aquaculture pond preparation, pending confirmation of the definitive classification of this specific proprietary product from the manufacturer/formulator (available on request).

Advice related to training:

Staff applying this product should be trained on correct pond-dosing procedures, PPE use, and the required withholding/dilution period before restocking, in addition to general SDS/label comprehension training.

Principal bibliographical sources:

The United Nations Economic Commission for Europe (UNECE); publicly available GHS classification reference data for formulated oxidizing biocide products used in aquaculture pond preparation.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | PBT: Persistent, Bioaccumulative and Toxic | vPvB: very Persistent, very Bioaccumulative

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET