

S-200C ANTISCALANT

#1: IDENTIFICATION

Product Identifier

- Trade name: S-200 Concentrate
- Manufacturing Part Numbers:
 - 208950
 - 210192
- Other means of identification:
No other identifiers

Recommended Use and Restriction on Use

- Recommended use: Antiscalant
- Restrictions on use: No relevant information available

Supplier Details

- Manufacturer/Supplier: AXEON® Water Technologies
 - 40980 County Center Drive
Temecula, CA 92591
 - Phone: 1-800-320-4074
 - Website: AXEONwater.com
 - Hours of Operation: Mon. through Fri.,
7:30 a.m. - 4:30 p.m.

Emergency Telephone Number

- CHEMTREC ALERT
 - 1-800-424-9300 (North America)
 - 1-703-527-3887 (International)

#2: HAZARD IDENTIFICATION

Classification of the Substance or Mixture

Met. Corr. 1	H290	Maybe corrosive to metals.
Acute Tox. 4	H302	Harmful if swallowed.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.

Label Elements

- GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms:



GHS05

GHS07

- Signal word: Danger

Hazard Statements

H290	Maybe corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

#2: HAZARD IDENTIFICATION (CONT.)

Precautionary Statements





P234	Keep only in original container.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.
P301+ P312	If swallowed: Call a poison center/ doctor if you feel unwell.
P330	Rinse mouth.
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.
P310	Immediately call a poison center/doctor.
P332+ P313	If skin irritation occurs: Get medical advice/attention.
P362+ P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards: There are no other hazards not otherwise classified that have been identified.

#3: COMPOSITION/INFORMATION ON INGREDIENTS

- Chemical characterization: Mixtures

Components

Trade secret acid	 Met. Corr. 1, H290; Eye Dam. 1, H318	< 70%
	 Acute Tox. 4, H302	
Trade secret acid	 Met. Corr. 1, H290; Skin Corr. 1A, H314	< 5%
	 Acute Tox. 4, H302	

Additional Information

- For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
- For the wording of the listed Hazard Statements, refer to section 16.
- Additional non-hazardous chemical components are not required to be listed.

#4: FIRST AID MEASURES

Description of First Aid Measures

- Inhalation:
 - Supply fresh air; consult doctor in case of complaints.
- Skin contact:
 - Immediately rinse with water.
 - If skin irritation is experienced, consult a doctor.
- Eye contact:
 - Protect unharmed eye.
 - Remove contact lenses if worn.
 - Rinse opened eye for several minutes under running water. Then consult a doctor.
- Ingestion:
 - Rinse out mouth and then drink plenty of water.
 - Do not induce vomiting; immediately call for medical help.
- Most important symptoms and effects, both acute and delayed:
 - Strong irritant with the danger of severe eye injury.
 - Irritant to skin and mucous membranes.
 - Gastric or intestinal disorders when ingested.
- Danger:
 - Causes serious eye damage.
 - Harmful if swallowed.
- Indication of any immediate medical attention and special treatment needed:
 - No relevant information available.

#5: FIRE FIGHTING MEASURES

Extinguishing Media

- Suitable extinguishing agents:
 - The product is not flammable.
 - Use firefighting measures that suit the environment.
- For safety reasons, unsuitable extinguishing agents:
 - No relevant information available.
- Special hazards arising from the substance or mixture:
 - During heating or in case of fire poisonous gases are produced.

Firefighting Procedures

- Protective equipment:
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- Additional information:
 - Cool endangered product with water spray.

#6: ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures:
 - Ensure adequate ventilation.
 - Wear protective equipment.
Keep unprotected persons away.
 - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- Environmental precautions:
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Methods and material for containment and cleaning up:
 - Towel or mop up material and collect in a suitable container.
 - For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard. Send for recovery or disposal in suitable receptacles.
- Reference to other sections:
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

#7: HANDLING AND STORAGE

Handling

- Precautions for safe handling:
 - Avoid splashes or spray in enclosed areas.
 - Use only in well ventilated areas.
 - Avoid contact with the eyes and skin.
 - Avoid breathing mist, vapors, or spray.
- Information about protection against explosions and fires:
 - No special measures required.

Storage Conditions

- Store in tightly closed containers in cool, dry, well-ventilated area away from incompatibles.
 - The maximum storage temperature for this material is 55°C / 131°F.
 - The minimum storage temperature for this material is 0°C / 32°F.

Conditions for Safe Storage, Including Any Incompatibilities

- Requirements to be met by storerooms and receptacles:
 - Store in cool, dry conditions in well-sealed receptacles.
 - Use only receptacles specifically permitted for this substance/product.
 - Unsuitable material for receptacle: aluminum or other metals
- Information about storage in one common storage facility:
 - Store away from foodstuffs.
 - Do not store together with alkalis (caustic solutions).
 - Store away from metals.
- Specific end use(s)
 - No relevant information available.

#8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control Parameters

- Components with limit values that require monitoring at the workplace:
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure Controls

- General protective and hygienic measures:
 - The usual precautionary measures for handling chemicals should be followed.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
- Engineering controls:
 - Provide adequate ventilation.
- Breathing equipment:
 - Use suitable respiratory protective device in case of insufficient ventilation.
 - Use suitable respiratory protective device when aerosol or mist is formed.

Protection of Hands

- Protective gloves
- Material of gloves:
 - Nitrile rubber, NBR
 - Natural rubber, NR
 - Neoprene gloves
 - Butyl rubber, BR
 - Fluorocarbon rubber (Viton)



Eye Protection



- Safety glasses
- Follow relevant national guidelines concerning the use of protective eyewear.
- Body protection:
 - Protective work clothing
- Limitation and supervision of exposure into the environment:
 - No relevant information available.
- Risk management measures:
 - No relevant information available.

#9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

- Appearance:
 - Form: Liquid
 - Color: Clear, colorless
- Odor: Not determined
 - Odor threshold: Not determined
- pH value: ≤ 2
 - Melting point/melting range: As water
 - Boiling point/boiling range: As water
- Flash point: The product is not flammable
- Flammability (solid, gaseous): Not applicable
- Auto-ignition temperature: Not determined
- Decomposition temperature: Not determined
- Danger of explosion: Product does not present an explosion hazard

#9: PHYSICAL AND CHEMICAL PROPERTIES (CONT.)

- Explosion limits
 - Lower: Not determined
 - Upper: Not determined
 - Oxidizing properties: Not determined
- Vapor pressure: Not determined
- Density:
 - Relative density: 1.45±0.1
 - Vapor density: Not determined
 - Evaporation rate: Not determined
- Solubility in/miscibility with water: Soluble
- Partition coefficient (n-octanol/water): Not determined
- Viscosity:
 - Dynamic: Not determined
 - Kinematic: Not determined
- Other information: No relevant information available

#10: STABILITY AND REACTIVITY

- Reactivity: No relevant information available.
- Chemical stability: Stable under normal temperatures and pressures.
- Thermal decomposition/conditions to be avoided: No decomposition if used and stored according to specifications.
- Possibility of hazardous reactions
 - Reacts with alkali (lyes).
 - Reacts with certain metals.
 - Toxic fumes maybe released if heated above the decomposition point.

- Conditions to avoid: Excessive heat.
- Incompatible materials: Alkalis and metals.
- Hazardous decomposition products:
 - Under fire conditions only:
 - Phosphorus oxides (e.g. P₂O₅)
 - Carbon monoxide and carbon dioxide

#11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

- Acute toxicity: Harmful if swallowed.
- LD/LC50 values that are relevant for classification: None.
- Primary irritant effect:
 - On the skin: Irritant to skin and mucous membranes.
 - On the eye: Strong irritant with the danger of severe eye injury.
 - Sensitization: Based on available data, the classification criteria are not met.
- IARC (International Agency for Research on Cancer): None of the ingredients are listed.
- NTP (National Toxicology Program): None of the ingredients are listed.
- OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients are listed.
- Probable route(s) of exposure:
 - Ingestion.
 - Inhalation.
 - Eye contact.
 - Skin contact.

- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

#12: ECOLOGICAL INFORMATION

Toxicity

- Aquatic toxicity: No relevant information available.
- Persistence and degradability: No relevant information available.
- Bioaccumulative potential: No relevant information available.
- Mobility in soil: No relevant information available.

Additional Ecological Information

- General notes:
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 - Due to available data on eliminability/ decomposition and bioaccumulation potential, prolonged damage of the environment is unlikely.

Results of PBT and vPvB Assessment

- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects: No relevant information available.

#13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Recommendation: The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Uncleaned Packaging

- Recommendation: Disposal must be made according to official regulations.

#14: TRANSPORTATION INFORMATION

UN-Number

- DOT, ADR, IMDG, IATA: UN3265

UN Proper Shipping Name

- DOT, IATA: Corrosive liquid, acidic, organic, n.o.s. (Organophosphonic acid)
- ADR, IMDG: Corrosive liquid, acidic, organic, n.o.s. (Organophosphonic acid)

#14: TRANSPORTATION INFORMATION (CONT.)




UN-Number

- DOT, ADR, IMDG, IATA: UN3265

UN Proper Shipping Name

- DOT, IATA: Corrosive liquid, acidic, organic, n.o.s. (Organophosphonic acid)
- ADR, IMDG: Corrosive liquid, acidic, organic, n.o.s. (Organophosphonic acid)

Transport Hazard Class(es)

DOT		Class: 8 Label: 8
ADR		Class: 8 (C3) Label: 8
IMDG, IATA		Class: 8 Label: 8

Packing Group

- DOT, ADR, IMDG, IATA: III

Environmental Hazards

- Marine pollutant: No

Special Precautions

- Special Precautions for User:
Warning: Corrosive substances
- Danger code (Kemler): 80
- EMS Number: F-A, S-B
- Segregation groups: Acids

Transport in Bulk

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional Information

- DOT: See 173.154(d) for corrosive exceptions.

#15: REGULATORY INFORMATION

Safety, Health And Environmental Regulations/legislation Specific For The Substance Or Mixture

- United States (USA)

SARA

- Section 302 (extremely hazardous substances):
None of the ingredients are listed.
- Section 355 (extremely hazardous substances):
None of the ingredients are listed.
- Section 313 (specific toxic chemical listings):
None of the ingredients are listed.
- TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65 (California)

- Chemicals known to cause cancer:
None of the ingredients are listed.
- Chemicals known to cause developmental toxicity for females: None of the ingredients are listed.
- Chemicals known to cause developmental toxicity for males: None of the ingredients are listed.
- Chemicals known to cause developmental toxicity: None of the ingredients are listed.

#15: REGULATORY INFORMATION (CONT.)

- EPA (Environmental Protection Agency): None of the ingredients are listed.
- IARC (International Agency for Research on Cancer): None of the ingredients are listed.
- Canadian Domestic Substances List (DSL) (Substances not listed): All ingredients are listed.

#16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and Acronyms

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

- PBT: Persistent, Bio-accumulable, Toxic
- vPvB: Very Persistent and very Bioaccumulative
- OSHA: Occupational Safety & Health Administration
- Met. Corr. 1: Corrosive to metals–Category 1
- Acute Tox. 4: Acute toxicity–Category 4
- Skin Corr. 1A: Skin corrosion/irritation –Category 1A
- Skin Irrit. 2: Skin corrosion/irritation–Category 2
- Eye Dam. 1: Serious eye damage/eye irritation–Category 1

Sources

- Website, European Chemicals Agency (echa.europa.eu)
- Website, Chemical Abstracts Registry, American Chemical Society (cas.org)
- Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
- Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
- Safety Data Sheets, Individual Manufacturers
- CHEMTREC, Falls Church, VA, USA
 - Toll Free:
 - North America: 1-800-424-9300
 - Intl: 1-703-527-3887
 - Chemtrec.com

NOTE: Safety data sheet according to OSHA HCS(29CFR 1910.1200) and WHMIS 2015 Regulations.