

Components	CAS #	Percent
Sodium bisulphite	7631-90-5	20 - 40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Rinse skin with water/shower.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Exposed individuals may experience eye tearing, redness, and discomfort. Irritation of eyes and mucous membranes. May cause respiratory irritation. Skin irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

7. Handling and storage

Precautions for safe handling	Vent carefully before opening. Sulfur dioxide can be formed during the normal use and handling of this product. Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.
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Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation. Avoid freezing. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium bisulphite (CAS 7631-90-5)	TWA	5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium bisulphite (CAS 7631-90-5)	TWA	5 mg/m ³

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical goggles are recommended.
Skin protection	
Hand protection	Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
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

Color	Colorless to light yellow
Physical state	Liquid
Odor	Strong
Odor threshold	Not available.
pH (concentrated product)	4.5
pH in aqueous solution	4.9 (5% SOL.)
Melting point/freezing point	18 °F (-8 °C)
Initial boiling point and boiling range	220 °F (104 °C)
Flash point	Not applicable.
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mm Hg

Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.27
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	6 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Percent volatile	0 (Calculated)
Pour point	23 °F (-5 °C)
Specific gravity	1.27

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 reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. None under normal conditions.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of sulphur evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of eyes and mucous membranes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause respiratory irritation. Skin irritation.

Information on toxicological effects

Acute toxicity May cause respiratory irritation.

Product	Species	Test Results
BETZDEARBORN DCL30 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l, 4 hours, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	3320 mg/kg, (Calculated according to GHS additivity formula)

Components	Species	Test Results
Sodium bisulphite (CAS 7631-90-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.5 mg/l, 4 Hour
<i>Oral</i>		
LD50	Rat	1420 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Sodium bisulphite (CAS 7631-90-5)	3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not available.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Product	Species	Test Results	
BETZDEARBORN DCL30 (CAS Mixture)			
LC50	Fathead Minnow	225 mg/L, Static Renewal Bioassay, 96 hour	
	Menidia beryllina (Silversides)	930 mg/L, Static Acute Bioassay, 96 hour, (pH adjusted)	
	Mysid Shrimp	370 mg/L, Static Acute Bioassay, 48 hour, (pH adjusted)	
NOEL	Fathead Minnow	160 mg/L, Static Renewal Bioassay, 96 hour	
	Menidia beryllina (Silversides)	156 mg/L, Static Acute Bioassay, 96 hour, (pH adjusted)	
	Mysid Shrimp	156 mg/L, Static Acute Bioassay, 48 hour, (pH adjusted)	
Aquatic			
Crustacea	LC50	Daphnia magna	225 mg/L, Static Renewal Bioassay, 48 hour
	NOEL	Daphnia magna	160 mg/L, Static Renewal Bioassay, 48 hour

Product		Species	Test Results
Fish	0% Mortality	Rainbow Trout	100 mg/L, Static Screen, 48 hour
	100% Mortality	Rainbow Trout	500 mg/L, Static Screen, 48 hour

* Estimates for product may be based on additional component data not shown.

Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	Not available.
Persistence and degradability	
- COD (mgO2/g)	49 (calculated data)

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (SODIUM BISULFITE SOLUTION), RQ
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
ERG number	171

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IATA

Not regulated as dangerous goods.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (SODIUM BISULFITE SOLUTION), RQ
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT



IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium bisulphite (CAS 7631-90-5) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

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 (SDWA)

Not regulated.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
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)
 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).

NSF Registered and/or meets USDA (according to 1998 guidelines):
 Registration No. – 147820
 Category Code(s):
 G5 Cooling and retort water treatment products
 G6 Boiler treatment products, steam line products – food contact

US state regulations

US - Massachusetts RTK - Substance List

Sodium bisulphite (CAS 7631-90-5)

US - Pennsylvania RTK - Hazardous Substances

Sodium bisulphite (CAS 7631-90-5)

US - Rhode Island RTK

Sodium bisulphite (CAS 7631-90-5)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

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

Sodium bisulphite (CAS 7631-90-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium bisulphite (CAS 7631-90-5)

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.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date	Oct-16-2014
Revision date	Aug-03-2015
Version #	1.0

List of abbreviations

CAS: Chemical Abstract Service Registration Number
 TWA: Time Weighted Average
 STEL: Short Term Exposure Limit
 LD50: Lethal Dose, 50%
 LC50: Lethal Concentration, 50%
 EC50: Effect Concentration, 50%
 NOEL: No Observed Effect Level
 COD: Chemical Oxygen Demand
 BOD: Biochemical Oxygen Demand
 TOC: Total Organic Carbon
 CEN: European Committee for Standardisation
 IATA: International Air Transport Association
 IMDG: International Maritime Dangerous Goods Code
 NFPA: National Fire Protection Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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.

Revision Information

Hazard(s) identification: Hazard statement
Hazard(s) identification: Prevention
Composition/information on ingredients: Composition comments
First-aid measures: Skin contact
First-aid measures: Most important symptoms/effects, acute and delayed
Handling and storage: Precautions for safe handling
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Toxicological information: Reproductive toxicity
Toxicological information: Inhalation
Toxicological information: Symptoms related to the physical, chemical and toxicological characteristics
Other information, including date of preparation or last revision: Prepared by
GHS: Classification

Prepared by

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