

Safety Data Sheet

SDS ID: Stock Code SH

Revision date: February 14, 2023

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: "Solar Hi-Temp" Heat Transfer and Anti-Freeze Solution
Synonyms: None
Chemical family: 1,2,3-propanetriol mixture
Producer: J.C. Whitlam Manufacturing Company
200 West Walnut Street
P.O. Box 380
Wadsworth, Ohio 44282-0380
www.solarhitemp.com

Telephone: 330-334-2524 Available during normal business hours

Emergency: CHEMTEL 800-255-3924 Available 24 hours

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

May cause adverse reproductive effects based upon animal studies. May cause eye and skin irritation. May cause respiratory tract irritation and digestive tract irritation

GHS Classification in accordance with 29 CFR 1910.1200

Reproductive Toxicity (Category 1B), H360

Signal Word and Hazard statements

DANGER — May damage fertility or the unborn child



Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P263 Avoid contact during pregnancy/while nursing.
P280 Use personal protective equipment as required, (see section 8)
P308+313 If exposed or concerned, get medical advice/attention.
P405 Store locked up.

Inhalation: P260 Do not breathe mist. May cause respiratory tract irritation.

Ingestion: P270 Do not eat, drink or smoke when using this product.
May cause irritation of the digestive tract.

Skin contact: P264 Wash hands thoroughly after handling. May cause irritation from prolonged or repeated contact.

Eye contact: May cause eye irritation.

Carcinogenic: No ingredients listed by the IARC, NTP, OSHA, or the ACHIH.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Material information:

Name	CAS No.	Weight %
Sodium tetraborate decahydrate	1303-96-4	<5
Non-hazardous ingredients	Not Applicable	>95

***Note:** The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

Section 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of the dangerous area.

Inhalation: Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Consult a physician.

Skin contact: Remove contaminated clothing and shoes. Wash affected skin with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious and alert, rinse the mouth with water. Call a physician or poison control center immediately.

Eye contact: Check for and remove any contact lenses, if easy to do so. If eye irritation persists, consult physician after flushing eyes with tepid water for 15 minutes.

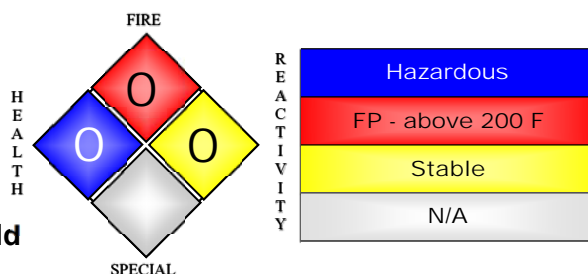
Section 5. FIREFIGHTING MEASURES

Suitable extinguishing media:	Use alcohol foam, carbon dioxide, or dry chemical.
Specific hazards:	Combustion products may include borane/boron oxides. Sodium oxides.
Advice for Firefighters:	Full protective equipment including self-contained breathing apparatus should be used. Do not allow run-off from fire-fighting to enter drains or water courses.

NFPA rating: HMIS rating:

Health:	0	1*
Flammability:	0	0
Instability/reactivity:	0	0
Other:	N/A	B (PPE)

***Chronic health hazard: Fertility or Unborn child**



Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid mist formation. Immediately contact emergency personnel. Evacuate any potentially affected area and isolate personnel from entry.
Large Spill:	Personnel must have appropriate training, per Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8).
Methods for Containment and Clean up	Shut off source if possible and if safe. Prevent entry into waterways and sewers. Dyke and/or absorb with vermiculite or other suitable material. Keep absorbed material in closed containers for disposal. Advise applicable authorities if material has entered sewers or water courses.

Section 7. HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapors. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Launder soiled clothing thoroughly before re-use.
Storage:	Keep all containers tightly closed when not in use. Do not store with incompatible materials. See Section 10, Stability and Reactivity.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Name	CAS No.	ACGIH® TLV® Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 ^c
Sodium tetraborate decahydrate	1303-96-4	2 ^{A,D}	Not Estab.	10 ^A
Glycerin	56-81-5	10 mg/m3	15 mg/m3	15 mg/m3

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

^A Time Weighted Average (TWA) is an average exposure over the course of an 8-hour work shift. Airborne aerosol (mist) as measured in milligrams (mist) per cubic meter of air.

^B A Short Term Exposure Limit TWA over the course of 15 minutes.

PEL — Permissible Exposure Limit is the maximum 8-hour TWA concentration of a chemical that a worker may be exposed to under Occupational Safety and Health Administration (OSHA) regulations.

^C Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.

^D Inhalable aerosol (mist).

Engineering measures: Local exhaust ventilation is preferable. General ventilation is acceptable if exposure to materials in this section is maintained below applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: When engineering controls are not sufficient to reduce exposure to levels below applicable exposure limits, seek professional advice prior to respirator selection and use. Wear a properly fitted NIOSH/ MSHA-approved respirator.

Skin and body protection: Wear impervious clothing and nitrile rubber gloves to prevent contact. Use the manufacturer's degradation and permeation data for protective material selection.

Eye protection: Wear safety spectacles with unperforated sideshields, or goggles.

Hygiene measures: Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and laundry before reuse.

Other precautions: Not applicable

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue liquid
Physical state (solid/liquid/gas): Liquid
Substance type (pure/mixture): Mixture
Color: Blue
Odor: Sweet odor
Molecular weight: Not available
pH: Not Applicable
Boiling point/range (5-95%): Not Available
Melting point/range: Not Available
Decomposition temperature: Not Available
Specific gravity: 1.19
Vapor density: (AIR = 1) 2.62
Vapor pressure: 0.22 mm Hg at 68°F
Evaporation rate (Butyl acetate= 1): <0.1
Flash point, method used: 350.6°F (177.0°C) TCC
Water solubility: 100%
VOC Content: Not Available
Auto-ignition temperature: Not Available
Flammable limits in air — lower (%): 2.6
Flammable limits in air — upper (%): 12.6

Section 10. STABILITY AND REACTIVITY

Reactivity:	No data available
Stability:	Stable under recommended storage conditions. This product is hygroscopic.
Possibly hazardous reactions:	No data available
Conditions to avoid:	Direct Sunlight. Extremely high or low temperatures
Incompatible Materials:	Oxidizing agents, reducing agents, acid chlorides, acid anhydrides, and chloroformates.
Hazardous decomposition products:	In a fire with limited oxygen: propionaldehyde, carbon monoxide.
Polymerization:	Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information:

Name	CAS No.	Inhalation:	Dermal:	Oral:
Sodium tetraborate decahydrate	1303-96-4	No data available.	LD ₅₀ (Rabbit) 10,000 mg/kg	Acute LD ₅₀ (Rat): 4,500-5,000 mg/kg
Glycerin	56-81-5	> 570 mg/m ³ (Rat) (Exposure time: 1h)	LD ₅₀ (Rabbit) > 10,000 mg/kg	12,600 (Rat) mg/kg

LC₅₀ — the concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

Carcinogenicity: The IARC, NTP, and OSHA: No component of this product, present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen.

Reproductive toxicity: RTCHS: VZ2275000. Sodium tetraborate decahydrate is identified as having fetotoxicity in animals. It is a presumed human reproductive toxicant. Animal feeding studies in rat, mouse, and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse, and rabbit, at high doses demonstrate developmental effects on the fetus.

Sensitization: Not known to cause sensitization in humans.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects: **Sodium tetraborate decahydrate**
LC₅₀ Carassius auratus (goldfish) 72-hour 178 mg/l.
EC₅₀ Daphnia magna (water flea) 48-hour 1,085-1,402 mg/l.
Glycerin
EC₅₀ Water flea 24-hour >10,000 mg/l.

Persistence: No data available.

Degradability: No data available.

Section 13. DISPOSAL CONSIDERATIONS

Cleanup considerations: This product is not a hazardous waste as defined under U.S. E.P.A. RCRA 40 CFR 261. Disposal of this material must be done in accordance with federal, state, provincial, and/or local regulations. P501 Dispose of contents/ container to an approved waste disposal plant. The material destined for disposal must be characterized properly and may differ from the product described in this SDS if mixed with other wastes.

Section 14. TRANSPORT INFORMATION

Please refer to DOT regulation 49 CFR 172.101:

Transport information: This material is not regulated under DOT when transported via U.S. commerce routes; and IATA, and IMO via international routes

Hazardous Materials Description: (DOT and IATA):

UN/identification no.: Not Applicable
Proper shipping name: Not Applicable
Hazard class: Not Applicable
Packing group: Not Applicable
DOT reportable quantity (lbs.): Not Applicable

Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

U.S. RCRA (40 CFR 261)

This product is not a hazardous waste as defined under RCRA 40 CFR 261.

State and community right-to-know regulations:

The following component(s) of this material are identified on the regulatory lists below:

U.S. TSCA Chemical inventory Section 8(b)

OSHA — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard (29 CFR 1910.1200)

CERCLA Sections 102a/103 (40 FR 302.4):

No ingredients are listed.

Some Components of this product are listed in the following sections of **SARA**:

SARA Title III Section 302 — N/A

SARA Title III Section 304 — N/A

SARA Title III Section 313 — N/A

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute health hazard:	No
Chronic health hazard:	Yes
Fire hazard:	No
Reactive Hazard:	No
Pressure Hazard:	No

California Proposition 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

WHMIS (Canada)

Class D-2A; D-2B: Material causing other toxic effects.

CAS# 1303-96-4 is listed on Canada's DSL List.

CAS# 1303-96-4 is listed on Canada's Ingredient Disclosure List.

NOTE: User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

Section 16. OTHER INFORMATION

Standards and Certification Listings:

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.