



Calcium Chloride/Nitrate Heavy Brine

SAFETY DATA SHEET

Date of Preparation: July 20, 2020

Section 1: IDENTIFICATION

Product Name: Calcium Chloride/Nitrate Heavy Brine

Synonyms: TCS HB 1400, TCS HB 1450, TCS HB 1500, TCS HB 1550, TCS HB 1600, Heavy Brine 1400, Heavy Brine 1450, Heavy Brine 1500, Heavy Brine 1550, Heavy Brine 1600, Winter Platinum.

Product Use: Oilfield Fluid.

Restrictions on Use: Not available.

Manufacturer/Supplier: Tiger Calcium Services
603-15 Ave
Nisku, AB T9E 7M6

Phone Number: 780-849-3114

Emergency Phone: Canutec: 613-996-6666

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Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification: Eye Irritation, Category 2A

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word: Warning

Hazard Statements: Causes serious eye irritation.

Precautionary Statements

Prevention: Wash hands thoroughly after handling.
Wear protective gloves, protective clothing and eye protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 30% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).



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This material is considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Calcium chloride	Not available.	10035-04-8	15 - 30
Nitric acid, calcium salt (2:1)	Calcium nitrate	10124-37-5	10 - 30
Nitric acid ammonium salt (1:1)	Ammonium nitrate	6484-52-2	0 - 5

Section 4: FIRST-AID MEASURES

- Inhalation:** If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
- Eye Contact:** If in eyes: Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
- Skin Contact:** If on skin: Wash with plenty of water. Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
- Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Ingestion of high amounts of Calcium nitrate can cause methaemoglobinaemia, blue-gray skin colour, weakness, dizziness, breathing difficulties, red skin, itching.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

High temperatures can evaporate Calcium nitrate to dryness, leaving crystals of calcium nitrate, an oxidizing material. Calcium nitrate does not require atmospheric oxygen and an explosion may occur in the presence of combustible materials.



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Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is not sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO2, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of nitrogen. Nitrogen.

Protection of Firefighters: Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways.

Methods for Containment: Stop leak if without risk. Do not flush to sewer or allow to enter waterways.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling: Do not swallow. Wash hands thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

Storage: Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines Component

Calcium chloride [CAS No. 10035-04-8]

ACGIH: No TLV established.

OSHA: No PEL established.



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Calcium nitrate [CAS No. 10124-37-5]

ACGIH: No TLV established.

OSHA: No PEL established.

Ammonium nitrate [CAS No. 6484-52-2]

ACGIH: No TLV established.

OSHA: No PEL established.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

Engineering Controls: Not normally required.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



- Eye/Face Protection:** Wear chemical safety goggles. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.
- Hand Protection:** Wear protective gloves. Consult manufacturer specifications for further information.
- Skin and Body Protection:** Wear protective clothing.
- Respiratory Protection:** Not required under normal use conditions.
- General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Clear to slightly turbid liquid.
- Colour:** Colourless to lightly brown.
- Odour:** Odourless.
- Odour Threshold:** Not available.
- Physical State:** Liquid.
- pH:** Not available.
- Melting Point / Freezing Point:** > -45 °C (-49 °F)
- Initial Boiling Point:** 110 °C (230 °F)
- Boiling Range:** 110 to 122 °C (230 to 251.6 °F)



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Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	1.3 to 1.6 (Water = 1) at 15 °C (59 °F)
Solubilities:	Soluble in water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability:	Stable under normal storage conditions.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials:	Strong acids. Strong bases. Combustible materials.
Hazardous Decomposition Products:	Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral:	Not available.
Dermal:	Not available.
Inhalation:	Not available.



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Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Calcium chloride	10035-04-8	Not available.	Not available.	Not available.
Calcium nitrate	10124-37-5	302 mg/kg (rat)	Not available.	Not available.
Ammonium nitrate	6484-52-2	2217 mg/kg (rat)	Not available.	Not available.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Ingestion of high amounts of Calcium nitrate can cause methaemoglobinaemia, blue-gray skin colour, weakness, dizziness, breathing difficulties, red skin, itching.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Blood.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Carcinogenicity: This product does not contain any carcinogens or potential carcinogens above reportable thresholds as listed by ACGIH, IARC, OSHA, or NTP.

Mutagenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.



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Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Label Code: Not applicable.

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Label Code: Not applicable.

Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III

No components are listed.



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State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Ammonium nitrate	6484-52-2	Listed.

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Calcium nitrate	10124-37-5	Listed.
Ammonium nitrate	6484-52-2	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Ammonium nitrate	6484-52-2	E

Note: E = Environmental Hazard

California

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: July 20, 2020

Version: 1.0

GHS SDS Prepared by: Deerfoot Consulting Inc.

Phone: (403) 720-3700