

**Section 1: IDENTIFICATION**

Product Name: Gibson Invert

Synonyms: Gibson OBM; Oil Based Mud.

Product Use: Used in oil field drilling fluid applications.

Restrictions on Use: Not available.

Manufacturer/Supplier: Gibson Energy ULC
1700, 440 – 2nd Ave. SW
Calgary, Alberta
T2P 5E9

Phone Number: (403) 206-4000

Emergency Phone: Canutec 613-996-6666 or cell *666

Date of Preparation of SDS: December 1, 2020

Section 2: HAZARD(S) IDENTIFICATION**GHS INFORMATION**

Classification: Skin Irritation, Category 2
Eye Irritation, Category 2A
Carcinogenicity, Category 1B
Aspiration Hazard, Category 1

LABEL ELEMENTS**Hazard****Pictogram(s):****Signal Word:** Danger

Hazard Statements: Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May be fatal if swallowed and enters airways.

Precautionary Statements

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash hands thoroughly after handling.
Wear protective gloves, protective clothing and eye protection.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical attention.
If eye irritation persists: Get medical attention.



Take off contaminated clothing and wash it before reuse.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 100% 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).

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.
Distillates (petroleum) *	Not available.	(various)	70 - 95
Calcium chloride (CaCl ₂)	Calcium chloride	10043-52-4	10 - 30
Calcium hydroxide (Ca(OH) ₂)	Calcium hydroxide	1305-62-0	0.5 - 5
Polycyclic Aromatic Hydrocarbons	Not available.	130498-29-2	variable

* The Petroleum distillates component of this product is made up of one or more of the following: Distillates (petroleum), straight-run middle (CAS No. 64741-44-2), Distillates (petroleum), hydrotreated light (CAS No. 64742-47-8), and/or Gas oils (petroleum), straight-run, high-boiling (CAS No. 68915-97-9).

* This product may contain between 0 and 100% previously used Invert.

Section 4: FIRST-AID MEASURES

Inhalation: If inhaled: Remove person to fresh air and keep comfortable for breathing.

Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

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. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: If swallowed: Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the



risk of aspiration. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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. Oral ingestion of Calcium chloride may cause serum acidosis.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Not flammable or combustible by OSHA/WHMIS criteria.

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

Sensitivity to Static Discharge: This material is sensitive to static discharge at temperatures at or above the flash point.

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 carbon. Oxides of sulphur. Oxides of nitrogen. Aldehydes. Oxides of calcium. Hydrogen chloride.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

Storage:

Store locked up. 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**

Distillates (petroleum), straight-run middle [CAS No. 64741-44-2]

ACGIH: A2; Exposure by all routes should be carefully controlled to levels as low as possible (2009); For Mineral oil, excluding metal working fluids; Poorly and mildly refined

OSHA: 5 mg/m³ (TWA); For Oil mist, mineral.

Distillates (petroleum), hydrotreated light [CAS No. 64742-47-8]

ACGIH: A2; Exposure by all routes should be carefully controlled to levels as low as possible (2009); For Mineral oil, excluding metal working fluids; Poorly and mildly refined

OSHA: 5 mg/m³ (TWA); For Oil mist, mineral.

Gas oils (petroleum), straight-run, high-boiling [CAS No. 68915-97-9]

ACGIH: A2; Exposure by all routes should be carefully controlled to levels as low as possible (2009); For Mineral oil, excluding metal working fluids; Poorly and mildly refined

OSHA: 5 mg/m³ (TWA); For Oil mist, mineral.

Calcium chloride [CAS No. 10043-52-4]

ACGIH: No TLV established.

OSHA: No PEL established.

Calcium hydroxide [CAS No. 1305-62-0]

ACGIH: 5 mg/m³ (TWA); (1979)

OSHA: 15 mg/m³ (Total dust) (TWA), 5 mg/m³ (Respirable fraction) (TWA); 5 mg/m³ (TWA) [Vacated];

Polycyclic Aromatic Hydrocarbons [CAS No. 130498-29-2]

ACGIH: A2; BEI; Exposure by all routes should be carefully controlled to levels as low as possible (1990); For Benz[a]anthracene

OSHA: 0.2 mg/m³ (TWA); For benzene-soluble fraction.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average



Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection: Wear chemical safety goggles. Ensure that eyewash stations and safety showers 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: If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

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:	Light to dark brown oily liquid.
Colour:	Light to dark brown.
Odour:	Hydrocarbon.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	10 to 11
Melting Point / Freezing Point:	Not available.
Initial Boiling Point:	> 170 °C (338 °F)
Boiling Range:	Not available.
Flash Point:	> 94 °C (201.2 °F) (ASTM D93)



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Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	< 7 kPa at 37.8 °C (100 °F) (RVP)
Vapor Density:	Not available.
Relative Density:	0.865 to 2.0 (Water = 1)
Solubilities:	Insoluble in water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	< 10 cSt at 40 °C (104 °F) (ASTM D-7042)
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:	Calcium chloride may form hydrogen chloride in presence of sulphuric or phosphoric acids.
Conditions to Avoid:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials:	Strong acids. Strong oxidizers. Metals. Phosphorus. Borane/boron oxides. Bromine trifluoride. Methyl vinyl ether.
Hazardous Decomposition Products:	Hydrogen chloride.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

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



Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Distillates (petroleum), straight-run middle	64741-44-2	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)	1700 mg/m ³ (rat); 4H
Distillates (petroleum), hydrotreated light	64742-47-8	Not available.	Not available.	Not available.
Gas oils (petroleum), straight-run, high-boiling	68915-97-9	Not available.	Not available.	Not available.
Calcium chloride	10043-52-4	1000 mg/kg (rat)	Not available.	Not available.
Calcium hydroxide	1305-62-0	7300 mg/kg (mouse)	Not available.	Not available.
Polycyclic Aromatic Hydrocarbons	130498-29-2	Not available.	Not available.	Not available.

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

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Bone marrow. Liver. Central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

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

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

Ingestion: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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. Bone marrow. Liver. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Lungs may be affected by repeated or prolonged exposure to Calcium hydroxide dust particles. This product contains Polycyclic Aromatic Hydrocarbons. Prolonged contact with these compounds has been associated with the induction of skin and lung tumours, anemia, disorders of the liver, bone marrow and lymphoid tissues.



Carcinogenicity: May cause cancer. This material contains Polycyclic Aromatic Hydrocarbons (PAHs), some of which are animal carcinogens.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Distillates (petroleum), straight-run middle	A2	Group 1	List 1	OSHA Carcinogen.	Listed.
Distillates (petroleum), hydrotreated light	A2	Group 1	List 1	OSHA Carcinogen.	Listed.
Gas oils (petroleum), straight-run, high-boiling	A2	Group 1	List 1	OSHA Carcinogen.	Listed.
Polycyclic Aromatic Hydrocarbons	A2	Not listed.	List 2	OSHA Carcinogen.	Listed.

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.

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

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Polycyclic Aromatic Hydrocarbons	Not listed.	Not listed.	Not listed.	313	Not listed.	Not listed.

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
Distillates (petroleum), straight-run middle	64741-44-2	Listed.
Distillates (petroleum), hydrotreated light	64742-47-8	Listed.
Gas oils (petroleum), straight-run, high-boiling	68915-97-9	Listed.
Calcium hydroxide	1305-62-0	Listed.
Polycyclic Aromatic Hydrocarbons	130498-29-2	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
Distillates (petroleum), straight-run middle	64741-44-2	SHHS
Distillates (petroleum), hydrotreated light	64742-47-8	SHHS
Gas oils (petroleum), straight-run, high-boiling	68915-97-9	SHHS
Calcium hydroxide	1305-62-0	Listed.



SAFETY DATA SHEET

Gibson Invert

Date of Preparation: December 1, 2020

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
Distillates (petroleum), straight-run middle	64741-44-2	S
Distillates (petroleum), hydrotreated light	64742-47-8	S
Gas oils (petroleum), straight-run, high-boiling	68915-97-9	S
Calcium hydroxide	1305-62-0	Listed.
Polycyclic Aromatic Hydrocarbons	130498-29-2	Listed.

Note: S = Special Hazardous Substance

California

California Prop 65:



WARNING This product can expose you to Petroleum distillates and Polycyclic Aromatic Hydrocarbons, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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: December 1, 2020

Version: 3.0

GHS SDS Prepared by: Deerfoot Consulting Inc.

Phone: (403) 720-3700