

BIT-SOLVE

SECTION 1. IDENTIFICATION

| | |
|--------------------------------------|--|
| Product Identifier | BIT-SOLVE |
| Other Means of Identification | EC-502 |
| Recommended Use | Heavy Duty Degreaser. |
| Restrictions on Use | Wash Bay removal of Bitumen, Oil Sands. |
| Manufacturer | Epsilon Chemicals Ltd., 1926-94 Street N.W., Edmonton, Alberta, T6N1J3, (780) 438-3040 |
| Emergency Phone No. | CANUTEC, (613) 996-6666, 24/7 |

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Flammable liquid - Category 4; Skin irritation - Category 3; Eye irritation - Category 2B; Aspiration hazard - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

| | |
|------|---|
| H227 | Combustible liquid. |
| H304 | May be fatal if swallowed and enters airways. |
| H320 | Causes eye irritation. |
| H316 | Causes mild skin irritation. |

Precautionary Statement(s):

Prevention:

| | |
|------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P264 | Wash hands and skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |

Response:

| | |
|--------------------|--|
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P315 | Get immediate medical advice or attention. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P304 + P341 | IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTRE or doctor. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 + P313 | If eye irritation persists: Get medical advice or attention. |

Storage:

Store locked up in a cool, well-ventilated place away from possible contaminants.

Keep container closed when not in use.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name | CAS No. | % | Other Identifiers | Other Names |
|---|-------------|-------|-------------------|-------------|
| Naphtha (petroleum), hydrotreated heavy | 64742-48-9 | 45-70 | | |
| Saturated Hydrocarbon Mixture | HMIRA #9233 | 15-40 | | |
| Stoddard solvent | 8052-41-3 | 10-30 | | |
| Blend of alcohols, C9-11, ethoxylated | 68439-46-3 | 1-5 | | |
| Docosate Sodium | 577-11-7 | 1-5 | | |

Notes

Concentrations are expressed in % weight/weight.

Actual concentrations are withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. If symptoms persist, seek medical attention.

Skin Contact

Flush contact areas with copious amounts of soap and water for at least 10 minutes. If irritation persists, or if contact has been prolonged, obtain medical attention. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eye Contact

Remove contact lenses AT ONCE. Flush eyes thoroughly with warm running water for 15 minutes holding eyelids open during flushing. If irritation occurs, get medical assistance.

Ingestion

Seek medical attention IMMEDIATELY. DO NOT INDUCE VOMITING. Rinse mouth with water. DO NOT ADMINISTER ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Do not leave victim unattended.

First-aid Comments

As with any chemical, employees should thoroughly wash hands with soap and water after handling this material.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

Do not use water to fight fire.

Specific Hazards Arising from the Product

Combustible. Emits toxic fumes under fire conditions. Avoid spraying water directly into storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapours. Either the liquid or vapour may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode. Use water spray to cool fire-exposed containers and structures. Contain fire control water for later disposal. DO NOT allow runoff to enter waterways or sewer.

Hazardous combustion products; Smoke, irritating vapours, oxides of carbon.

Special Protective Equipment and Precautions for Fire-fighters

Fire fighters should wear full protective clothing, including self-contained breathing equipment.

Product Identifier: BIT-SOLVE - Ver. 1
Date of Preparation: August 28, 2017
Date of Last Revision: September 10, 2018

See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Prevent entry into sewers or streams. Dike if needed.

Methods and Materials for Containment and Cleaning Up

Dike spilled product to prevent runoff. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other Information

For cleanup, use equipment rated for use around combustible materials and eliminate all ignition sources. Report spills to local health, safety and environmental authorities, as required. Contact supplier, local fire and emergency services for help.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, or flame. Open container slowly to release pressure caused by temperature variations. DO NOT handle or store near an open flame, heat, or other sources of ignition. Do not allow this material to come into contact with eyes. Avoid prolonged contact with skin. Use in well-ventilated areas. Do not breathe vapours. As with any chemical, employees should thoroughly wash hands with soap after handling this material.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, clear of combustible and flammable materials (e.g. old rags, cardboard), separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Comply with all applicable health and safety regulations, fire and building codes. Keep container closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Chemical Name | ACGIH® TLV® | | OSHA PEL | | AIHA® WEEL® | |
|------------------|-------------|----------|----------|---------|-------------|--------------------|
| | TWA | STEL [C] | TWA | Ceiling | 8-hr TWA | Short-term TWA [C] |
| Stoddard solvent | 100 ppm | | 500 ppm | | | |

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Keep away from sparks and flames.

Individual Protection Measures

Eye/Face Protection

Wear safety goggles or glasses with side shield.

Skin Protection

Nitrile or rubber gloves are recommended. Boots, apron, or body suit should be worn as necessary.

Respiratory Protection

Not normally required if product is used as directed. If concentration exceeds exposure limits, a NIOSH approved respirator is required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|------------------------------|--------------------------|
| Appearance | Clear colourless liquid. |
| Odour | Apple-like |
| Melting Point/Freezing Point | < -25 °C (freezing) |
| Flash Point | 61 °C (closed cup) |

Product Identifier: BIT-SOLVE - Ver. 1
Date of Preparation: August 28, 2017
Date of Last Revision: September 10, 2018

| | |
|-------------------------------------|---------------------------------------|
| Vapour Density (air = 1) | > 1 |
| Relative Density (water = 1) | 0.81 |
| Solubility | Insoluble (less than 1 mg/L) in water |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

May release COx, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---------------------------------------|------------------------------------|--------------------|--------------------------|
| Stoddard solvent | > 5.5 mg/L (rat) (4-hour exposure) | > 5000 mg/kg (rat) | > 3000 mg/kg (rabbit) |
| Saturated Hydrocarbon Mixture | > 6800 mg/L | > 5000 mg/kg (rat) | 2000-4000 mg/kg (rabbit) |
| Blend of alcohols, C9-11, ethoxylated | Not available | 1378 mg/kg (rat) | > 2000 mg/kg (rabbit) |
| Docusate Sodium | Not available | 3080 mg/kg (rat) | > 10000 mg/kg (rabbit) |

Skin Corrosion/Irritation

Low toxicity. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis). Skin contact may aggravate an existing dermatitis condition.

Serious Eye Damage/Irritation

May cause mild, short-lasting discomfort to eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

High vapour/aerosol concentrations (attainable at elevated temperatures well above ambient) are irritation to the eyes and respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects. May be fatal if swallowed and enters airways.

Ingestion

May be fatal if swallowed and enters airways.

Carcinogenicity

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|---------------------------------------|------------|----------------|------------|------------|
| Stoddard solvent | Group 3 | Not designated | Not Listed | Not Listed |
| Saturated Hydrocarbon Mixture | Not Listed | Not designated | Not Listed | Not Listed |
| Blend of alcohols, C9-11, ethoxylated | Not Listed | Not designated | Not Listed | Not Listed |
| Docusate Sodium | Not Listed | Not designated | Not Listed | Not Listed |

SECTION 12. ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

Product Identifier: BIT-SOLVE - Ver. 1
Date of Preparation: August 28, 2017
Date of Last Revision: September 10, 2018

Ecotoxicity

This material is expected to be toxic to aquatic life. May cause long-term adverse effects in the aquatic environment. Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Clean containers prior to disposal. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. Risk of explosion.

SECTION 14. TRANSPORT INFORMATION

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|------------------------------|---------------------------------|---------------|
| US DOT | 1268 | Petroleum distillates N.O.S. | Class 3 (Combustible Liquid) | III |
| Canadian TDG | 1268 | Petroleum distillates N.O.S. | Class 3 (Combustible Liquid) | III |

Special Precautions Please note: Not regulated under TDG Act when transported by road or rail in packaging or containers of 450L or less

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

SDS Prepared By Technical Service Department, Epsilon Chemicals

Phone No. (780) 438-3040

Date of Preparation August 28, 2017

Date of Last Revision September 10, 2018

Key to Abbreviations IARC = International Agency for Research on Cancer

Disclaimer The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from

Product Identifier: BIT-SOLVE - Ver. 1

Date of Preparation: August 28, 2017

Date of Last Revision: September 10, 2018

Page 05 of 06

the use of the product described herein.