



CALYPSO

Material Safety Data Sheet (MSDS)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **CALYPSO**

2. HAZARD IDENTIFICATION

OVERVIEW: This product is a dark liquid with a mild odor.

HEALTH HAZARDS: This product has no known health hazards. May irritates to eyes and/or skin to sensitive individuals.

FLAMMABILITY: This product is a non-flammable liquid.

ENVIRONMENTAL EFFECTS: The environmental effects of this product have been investigated. This product is not expected to be toxic to aquatic organisms.

GHS Classification

Product is not classified as hazardous under GHS criteria or OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label Elements:

Signal Word(s): None

Physicochemical hazards: None

Toxicological Health Effects: None known

Hazard Statement(s): None

Precautionary Statement(s): None

Physicochemical hazards: None

Toxicological Environmental Effects: None known

Hazardous information:

Hazard Statements

H317: May cause an allergic skin reaction

Risk Phrases

R43: May cause sensitization by skin contact

Precautionary Statements

P103: Read label before use

Safety Phases

S13: Keep away from food, drink and animal foodstuffs

S25: Avoid contact with eyes

S39: Wear eye/face protection

S262: Do not get in eyes, on skin, or on clothing

Instructions:

Precautions: Wear eye protection. Wear gloves to avoid skin contact on sensitive people.

First-Aid

Measures If on skin wash with soap and water. If skin irritation or rash occurs get medical attention. If in eye, rinse with clean water.

Storage Store with lid tightened and out of direct sun.

Disposal Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Compound: Compound

Common Chemical Name: CALYPSO W

Composition and content:

Material Notice through

Name CAS No. official file no. Content

Bitumen 8052-42-4 10-60%

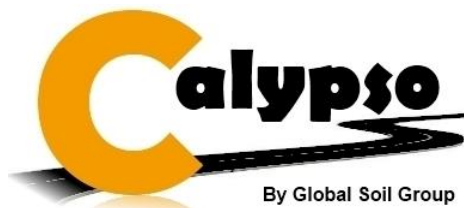
Stabilizer Trade Secret 5-40%

Emulsifier Trade Secret <6%

Water 7732-18-5 Balance

Additional Comments: Though further detail on contents may be confidential, all pertinent hazards are addressed in this MSDS.





CALYPSO

Material Safety Data Sheet (MSDS)

4. FIRST-AID MEASURES

Inhalation Remove victim from exposure to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

Skin Contact Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent and large amounts of water until no evidence of material remains. If redness or irritation occurs seek medical attention.

Eye Contact Check for and remove any contact lenses. Promptly wash eyes with large amounts of water. Lift upper and lower lids until no evidence of material remains (15-20 minutes). Seek immediate medical attention.

Ingestion Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Expected acute symptoms **Inhalation** Avoid prolonged inhalation of vapors or mist. Product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions.

Skin Contact Adverse symptoms may include irritation or redness

Eye Contact Adverse symptoms may include irritation, watering or redness

Protection for first-aid workers No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth to mouth resuscitation.

Special notes for doctors No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE FIGHTING MEASURES

Extinguishing media Dry chemical, CO₂, Halon, Water Spray, or Standard Foam

Prohibited media None Known

Specific hazards with regard to fire-fighting In a fire or if heated, a pressure increase will occur and the container may burst.

Specific methods of fire-fighting Move containers from fire area if possible. Cool fire-exposed containers with water from side until well after fire is out. Stay away from storage tank end for massive fire in storage area. Use unmanned hose holder or monitor. Use flooding amounts of water as a fog, as solid streams may be ineffective. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage vessel due to fire. Extinguish only if flow can be stopped. Water or foam may cause frothing. Avoid breathing toxic vapors and keep upwind.

Protection for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Additional Comments Material is a bitumen emulsion and will not ignite until water is driven off. Hazardous combustion products may include carbon monoxide and unidentified organic compounds.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action should be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering the spill site. Use appropriate personal protective equipment (see Section 8).

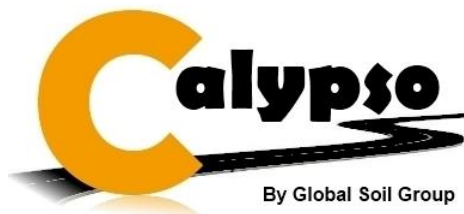
Environmental precautions Prevent product from entering storm drains, sewers, streams or other bodies of water. Inform the appropriate authorities if product has entered such areas.

Methods for cleaning up Stop leak if without risk. Remove containers from spill area. Avoid using water as this will spread the spilled material. Absorb product with an inert material such as sand or earth and transfer the spilled material and absorbent to an appropriate waste disposal container. Dispose of waste according to applicable regulations. Large spills if contained may be pumped back into a storage container if a filter is in place to catch debris.

7. HANDLING AND STORAGE

Handling Put on appropriate personal protective equipment (see Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and used. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Store the product in its original container or acceptable alternative. Label non-original containers. Keep containers tightly closed when not in use. Containers may be rinsed out easily if product is not allowed to dry.

Storage Store in accordance with local regulations. Store in original container and keep tightly sealed. Shelf life of product is maximized when protected from direct sunlight and stored in a cool well ventilated area. Use appropriate containment to avoid environmental contamination.



CALYPSO

Material Safety Data Sheet (MSDS)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective equipment: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants

Control parameters: Emissions from ventilation or application process should be checked to ensure they comply with the requirements of environmental protection legislation.

Personal protection equipment

Respiratory protections: Respirator is not required for normal use of this product. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Though respirator is not required, use of adequate ventilation is a good industrial practice.

Hand protection: Workers should wear a chemical-resistant, impervious glove when handling chemical products if a risk assessment indicates this is necessary. Disposable vinyl type gloves are adequate for this product to prevent repeated or prolonged contact with skin.

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Safety glasses with side shields, splash goggles or face shields are recommended depending on the anticipated exposure level.

Skin and body protection: Personal protective equipment should be selected based on the task being performed. Typical recommended clothing can include lab coat, safety apron, overall or other long sleeved clothing.

Specific Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Make arrangements for portable eyewash station while on remote job sites.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Form: Liquid

Color: Dark Brown

Odor: Mild, bitumen / molasses odor

PH not determined

Melting/Freezing point: ~17oF (-8oC)

Boiling point: >100oC (>212o F)

Flash point: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific gravity (g/cm³) 1.01 to 1.07

Density (lbs/gal) 8.4 to 8.9

Solubility in water: Complete (100%)

Evaporation rate: No data available

Viscosity(cP): 345-660 (concentrate 82oF-50oF)

2-20 (as diluted)

10. STABILITY AND REACTIVITY

Stability: Material is stable under normal temperature and pressure.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Conditions to avoid: Do not expose to prolonged heating above 100oC

Materials to avoid: None

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Toxicological data have not been determined specifically for this product. Information given is based on data on the components and the toxicology of similar products.

Skin corrosive / irritation: May be slightly irritating on sensitive people.

Serious eye damage / Eye irritation: May be slightly irritating.

Respiratory organs sensitization: None known however if mists are inhaled, slight irritation of the respiratory track may occur.

Skin sensitization: May be slightly irritating on sensitive people.

Original generative cell variation: Not considered a mutagenic hazard.



CALYPSO

Material Safety Data Sheet (MSDS)

Cancerous primeval Not classified as dangerous under GHS criteria.
Reproduction toxicity: Data not available.
Specification target internal organs
/Whole toxicity (single revelation): Data not available.
Specification target internal organs
/Whole toxicity (repeat revelation): Data not available.
Absorption respiratory organs toxicity: Data not available.

12. ECOLOGICAL INFORMATION

Aquatic environmental toxicity: acute

CALYPSO W

Greater than 5,000-ppm on *Oncorhynchus mykiss* (rainbow trout)
Greater than 5,000-ppm on *Pimephales promelas* (fathead minnow)
Aquatic toxicity test results show that CALYPSO W is non-hazardous to fish. The United States Environmental Protection Agency regard LC50 value of greater than 5,000-ppm to be "practically non-toxic".
Test Method: EPA-821-R-02-012

CALYPSO W

Greater than 2,240-ppm on *Oncorhynchus mykiss* (rainbow trout)
Greater than 3,420-ppm on *Pimephales promelas* (fathead minnow)
Aquatic toxicity test results show that CALYPSO W Stabilizer is non-hazardous to fish
Test Method: EPA-821-R-02-012

Aquatic environmental toxicity: chronic

No chronic toxicity data available.

13. DISPOSAL CONSIDERATIONS

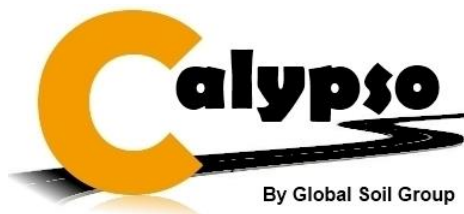
Residues/Material Disposal In most cases product will be completely used. Dispose of residue in accordance with local and national regulations. Do not dispose into the environment, in drains, or in water courses.
Pollution Container and Packing Dispose in accordance to prevailing regulations, preferably to a recognized collector or contractor.
Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

UN No.: Not Regulated
Proper shipping Name: Not Applicable
Class: Not Applicable
Sub Risk: Not Applicable
Packing Group: Not Applicable
International Restriction
RID/ADR information: This material is not classified as dangerous under ADR regulations.
IMo information: This material is not classified as dangerous under IMO regulations.
IATA information: This material is not classified as dangerous under IATA regulations. Country variations may apply.
Domestic restriction:
Rail and road trans info: No restrictions
Marine trans info: No restrictions
Aviation transportation info:
Specific precautionary transport measures None recommended
and conditions

15. REGULATORY INFORMATION

The following regulatory information is not intended to be comprehensive. Other regulations may apply to this product.
D.O.T. Proper Shipping Name (49 CFR 172.101) Non-hazardous Emulsion
D.O.T. Hazard Class (49 CFR 172.101) Not Applicable
UN / NA Code (49 172.101) Not Applicable
Packaging Group (49 172.101) Not Applicable
Bill Of Lading Description (49 172.101) Non-hazardous Emulsion



CALYPSO

Material Safety Data Sheet (MSDS)

D.O.T. Labels Required (49 172.101) Not Applicable
D.O.T. Placards Required (49 172.101) Not Applicable

16. OTHER INFORMATION

GHS SDS Version Number: 1.0

SDS Effective Date: January 1, 2013

SDS Revisions:

Uses and Restrictions: This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier.

SDS Distribution: The information in this document should be made available to all who may handle the product.

Disclaimer: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Rev: 1/16

