MATERIAL SAFETY DATA SHEET



Asphalt, Sulfonated, Sodium Salt

Revision Date 2011-05-04

Version 1.1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

| Froduct information | | |
|--|--|--|
| Trade name Material | : Asphalt, Sulfonated, Sodium Salt : 1104392 | |
| Use | : Drilling Mud Additive | |
| Company | Chevron Phillips Chemical Company LP Drilling Specialties Company 10001 Six Pines Drive The Woodlands, TX 77380 | |
| Emergency telephone: | | |
| Health : 866.442.9628 (North Am 1.832.813.4984 (Interna | | |
| Asia: +800 CHEMCALL EUROPE: BIG +32.14.5 Chemcare Asia: Tel: +65 | REC 800.424.9300 or 703.527.3887 (+800 2436 2255) China: 0532.8388.9090 84545 (phone) or +32.14583516 (telefax) 5 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848 ec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600 | |
| Responsible Department E-mail address Website | Product Safety and Toxicology Group MSDS@CPChem.com www.CPChem.com | |
| 2. HAZARDS IDENTIFICATION | | |
| Emergency Overview | | |
| Physical state: Solid | Color: Dark Brown, Black Odor: No odor | |
| OSHA Hazards | : This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200. | |
| GHS Classification | | |
| Not a dangerous substance | or mixture according to the Globally Harmonized System (GHS). | |

GHS-Labeling

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Carcinogenicity:

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

MSDS Number:100000013873

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| ersion 1.1 | Revision Date 2011-05-0 | | |
| NTP | human carcinogen by IARC. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. | | |
| ACGIH | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. | | |
| COMPOSITION/INFORMATIO | N ON INGREDIENTS | | |
| Synonyms | : DRILLING MUD ADDITIVE Shale Inhibitor | | |
| Molecular formula | : UVCB | | |
| Contains no hazardous ingre | dients according to GHS. | | |
| FIRST AID MEASURES | | | |
| | | | |
| General advice | : No hazards which require special first aid measures. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Call a doctor immediately if allergic signs, particularly in the respiratory tract, are observed. | | |
| FIRE-FIGHTING MEASURES | | | |
| Flash point | : Not applicable | | |
| Autoignition temperature | : No data available | | |
| Specific hazards during fire fighting | : Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray. | | |
| Special protective equipment for fire-fighters | : In the event of fire, wear self-contained breathing apparatus. | | |
| ACCIDENTAL RELEASE MEA | SURES | | |
| | | | |
| Personal precautions | : Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. | | |
| Environmental precautions | Local authorities should be advised if significant spillages cannot be contained. | | |
| Methods for cleaning up | : Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly while observing environmental regulations. | | |
| | | | |

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7. HANDLING AND STORAGE

Handling

Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Storage

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

| Eye protection | : Safety glasses. Ensure that eyewash stations and saf showers are close to the workstation location. | ety |
|---------------------|---|---------|
| Hygiene measures | : Wash hands before breaks and immediately after hand product. Remove contaminated clothing and protectiv equipment before entering eating areas. | |
| Protective measures | : Wear suitable protective equipment. When using do r drink or smoke. | ot eat, |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | |
|-----------------------------|--------------------------------|
| Physical state Color | : Solid : Dark Brown, Black |
| Odor | : No odor |
| Safety data | |
| Flash point | : Not applicable |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| | |
| Oxidizing properties | : No |
| Autoignition temperature | : No data available |
| Molecular formula | : UVCB |
| Molecular Weight | : Not applicable |
| PH | : Not applicable |
| Boiling point/boiling range | : Not applicable |
| Vapor pressure | : Not applicable |

| phalt, Sulfonated, S | Sodium Salt |
|---|---|
| sion 1.1 | Revision Date 2011-05 |
| Relative density | : 1.4 - 1.6 |
| | . 1.4 1.0 |
| Water solubility | : Partly soluble |
| Viscosity, kinematic | : Not applicable |
| Relative vapor density | : Not applicable |
| STABILITY AND REACTIVI | TY |
| Possibility of hazardous re | Pactions |
| Conditions to avoid | : Not applicable. |
| Other data | This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| TOXICOLOGICAL INFORM | |
| Asphalt, Sulfonated, Sodie Aspiration toxicity ECOLOGICAL INFORMATIO | : No aspiration toxicity classification. |
| Aspiration toxicity | : No aspiration toxicity classification. |
| Aspiration toxicity | : No aspiration toxicity classification. |
| Aspiration toxicity ECOLOGICAL INFORMATIO | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable pology |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec DISPOSAL CONSIDERATION | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable ology |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec DISPOSAL CONSIDERATION The information in this MSD Use material for its intended may meet the criteria of a h other State and local regular regulated components may | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable pology |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec DISPOSAL CONSIDERATION The information in this MSD Use material for its intended may meet the criteria of a h other State and local regular regulated components may classified as a hazardous w | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable Dology DNS DNS DS pertains only to the product as shipped. d purpose or recycle if possible. This material, if it must be discarded, azardous waste as defined by US EPA under RCRA (40 CFR 261) or tions. Measurement of certain physical properties and analysis for be necessary to make a correct determination. If this material is |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec DISPOSAL CONSIDERATION The information in this MSD Use material for its intended may meet the criteria of a h other State and local regular regulated components may classified as a hazardous w disposal facility. | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable ology DNS ONS OS pertains only to the product as shipped. d purpose or recycle if possible. This material, if it must be discarded, azardous waste as defined by US EPA under RCRA (40 CFR 261) or tions. Measurement of certain physical properties and analysis for be necessary to make a correct determination. If this material is vaste, federal law requires disposal at a licensed hazardous waste Dispose of wastes in an approved waste disposal facility. |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ec DISPOSAL CONSIDERATION The information in this MSD Use material for its intended may meet the criteria of a h other State and local regular regulated components may classified as a hazardous w disposal facility. Product TRANSPORT INFORMATION The shipping descriptions | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable ology DNS ONS OS pertains only to the product as shipped. d purpose or recycle if possible. This material, if it must be discarded, azardous waste as defined by US EPA under RCRA (40 CFR 261) or tions. Measurement of certain physical properties and analysis for be necessary to make a correct determination. If this material is vaste, federal law requires disposal at a licensed hazardous waste Dispose of wastes in an approved waste disposal facility. |
| Aspiration toxicity ECOLOGICAL INFORMATION Elimination information (p Biodegradability Further information on ecc DISPOSAL CONSIDERATION The information in this MSD Use material for its intended may meet the criteria of a h other State and local regular regulated components may classified as a hazardous w disposal facility. Product TRANSPORT INFORMATION The shipping descriptions shipments in non-bulk par Consult the appropriate dom Goods Regulations for addit | No aspiration toxicity classification. ON Dersistence and degradability) Not applicable ology DNS OS pertains only to the product as shipped. d purpose or recycle if possible. This material, if it must be discarded, azardous waste as defined by US EPA under RCRA (40 CFR 261) or tions. Measurement of certain physical properties and analysis for be necessary to make a correct determination. If this material is raste, federal law requires disposal at a licensed hazardous waste Dispose of wastes in an approved waste disposal facility. N a shown here are for bulk shipments only, and may not apply to |

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Asphalt, Sulfonated, Sodium Salt

Version 1.1

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description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

USDOT

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ΙΑΤΑ

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION

National legislation

SARA 311/312 Hazards : No SARA Hazards

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

| SARA 302 Reportable Quantity SARA 304 Ingredients SARA 313 Ingredients | SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. This material does not contain any components with a section 304 EHS RQ. SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the |
|---|--|
| | threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
| Clean Air Act | |
| Ozone-Depletion Potential | : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |
| MSDS Number:100000013873 | 5/7 |

| ngredients of California to c | |
|--|---|
| defects. | es not contain any chemicals known to the Sta cause cancer, birth, or any other reproductive |
| Jnited States of America US.TSCA:On theCanada DSL:On theAustralia AICS:On theNew Zealand NZIoC:Not in cJapan ENCS:On theKorea KECI:On thePhilippines PICCS:On the | inventory, or in compliance with the inventory inventory, or in compliance with the inventory inventory, or in compliance with the inventory inventory, or in compliance with the inventory compliance with the inventory inventory, or in compliance with the inventory |
| THER INFORMATION | |
| NFPA Classification : Health Hazard: Fire Hazard: 0 Reactivity Hazar | |
| Further information _egacy MSDS Number : CPC00246 | |
| Significant changes since the last version are hig previous versions. | |
| The information in this MSDS pertains only to the The above information is based on the data of whas of the date hereof. Since this information may and with which we may be unfamiliar and since d hereof may suggest modifications of the information results of its use. This information is furnished up make his own determination of the suitability of the | hich we are aware and is believed to be correct be applied under conditions beyond our contr ata made available subsequent to the date ion, we do not assume any responsibility for th bon condition that the person receiving it shall |
| Key or legend to abbreviations and a ACGIH American Conference of Government | cronyms used in the safety data sheet LOAEL Lowest Observed Adverse Effect Lev |
| Industrial Hygienists | NFPA National Fire Protection Agency |
| AICS Australia, Inventory of Chemical Substances | |
| | NIOSH National Institute for Occupational Sa & Health |
| AICS Australia, Inventory of Chemical Substances DSL Canada, Domestic Substances List NDSL Canada, Non-Domestic Substances List | & Health NTP National Toxicology Program |
| AICS Australia, Inventory of Chemical Substances DSL Canada, Domestic Substances List | & Health |

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| EC50 | Effective Concentration 50% | OSHA | Occupational Safety & Health |
|--------|---|-------|------------------------------------|
| | | | Administration |
| EINECS | European Inventory of Existing Chemical | PEL | Permissible Exposure Limit |
| | Substances | | |
| MAK | Germany Maximum Concentration | PICCS | Philipines Inventory of Commercial |
| | Values | | Chemical Substances |
| GHS | Globally Harmonized System | PRNT | Presumed Not Toxic |
| >= | Greater Than or Equal To | RCRA | Resource Conservation Recovery Act |
| IC50 | Inhibition Concentration 50% | STEL | Short-term Exposure Limit |
| IARC | International Agency for Research on | SARA | Superfund Amendments and |
| | Cancer | | Reauthorization Act. |
| IECSC | Inventory of Existing Chemical | TLV | Threshold Limit Value |
| | Substances in China | | |
| ENCS | Japan, Inventory of Existing and New | TWA | Time Weighted Average |
| | Chemical Substances | | |
| KECI | Korea, Existing Chemical Inventory | TSCA | Toxic Substance Control Act |
| <= | Less Than or Equal To | UVCB | Unknown or Variable Compositon, |
| | ' | | Complex Reaction Products, and |
| | | | Biological Materials |
| LC50 | Lethal Concentration 50% | WHMIS | Workplace Hazardous Materials |
| | | | Information System |
| LD50 | Lethal Dose 50% | | |