SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information
Product Name: Diace® Adjustable Spacer Viscosifier
Material: 1113834, 1097192

Use: Oil Field Cement Spacer

Company: Chevron Phillips Chemical Company LP
Drilling Specialties Company LLC
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
CHEMTREC 800.424.9300 or 703.527.3887(int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification: Carcinogenicity, Category 1A

Labeling
Symbol(s) : 
Signal Word : Danger
Hazard Statements : H350: May cause cancer.
Precautionary Statements : 
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/container to an approved waste disposal plant.

Carcinogenicity:
IARC Group 1: Carcinogenic to humans
Crystalline Silica 14808-60-7
NTP Known to be human carcinogen
Crystalline Silica 14808-60-7
ACGIH Suspected human carcinogen
Crystalline Silica 14808-60-7

SECTION 3: Composition/information on ingredients

Synonyms : DAS-V
Molecular formula : Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance.
If inhaled : Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.
In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while
rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : Not applicable
Autoignition temperature : Not applicable

Unsuitable extinguishing media : High volume water jet.
Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and explosion protection : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Hazardous decomposition products : Carbon oxides. Sulfur oxides.

SECTION 6: Accidental release measures

Personal precautions : Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up : Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Advice on safe handling : Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
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Version 2.2
Revision Date 2019-12-09

Storage

Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Use: Oil Field Cement Spacer

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>OSHA Z-3</td>
<td>TWA 250mppcf / %SiO2+5</td>
<td>(f), a, b, respirable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-3</td>
<td>TWA 10mg/m3 / %SiO2+2</td>
<td>(f), e, respirable</td>
<td>Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>OSHA Z-3</td>
<td>TWA 0.1 mg/m3</td>
<td>Respirable dust fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1-A</td>
<td>TWA 0.1 mg/m3</td>
<td>Respirable dust fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TWA 0.025 mg/m3</td>
<td>Lung cancer, pulm fibrosis, A2, Respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1</td>
<td>TWA 0.05 mg/m3</td>
<td>Respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1</td>
<td>TWA 0.05 mg/m3</td>
<td>Respirable dust fraction</td>
<td></td>
</tr>
</tbody>
</table>

(f) This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect.
(a) Million of particles per cubic foot of air, based on impinger samples counted by light-field techniques.
(b) The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.
(e) Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics: Aerodynamic diameter (unit density sphere): 2; Percent passing selector: 90 Aerodynamic diameter (unit density sphere): 2.5; Percent passing selector: 75; Aerodynamic diameter (unit density sphere): 3.5; Percent passing selector: 50; Aerodynamic diameter (unit density sphere): 5.0; Percent passing selector: 25; Aerodynamic diameter (unit density sphere): 10; Percent passing selector: 0. The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m3 in the table for coal dust is 4.5 mg/m3.

Hazardous components without workplace control parameters

Immediately Dangerous to Life or Health Concentrations (IDLH)

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>Immediately Dangerous to Life or Health Concentration Value 50 mg/m³</td>
<td>1995-03-01</td>
</tr>
</tbody>
</table>

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to...
maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Air-Purifying Respirator for Dusts and Mists.

Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection: Eye wash bottle with pure water. Safety glasses.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Lightweight protective clothing.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

### SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

**Appearance**
- **Form**: Powder
- **Physical state**: Solid
- **Color**: off-white, tan

**Safety data**
- **Flash point**: Not applicable
- **Lower explosion limit**: No data available
- **Upper explosion limit**: No data available
- **Oxidizing properties**: No
- **Autoignition temperature**: Not applicable
- **Molecular formula**: Mixture
- **Molecular weight**: Not applicable
- **pH**: Not applicable
- **Pour point**: No data available
- **Boiling point/boiling range**: No data available
- **Vapor pressure**: No data available
- **Relative density**: No data available
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**Version 2.2**

**Revision Date 2019-12-09**

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**Water solubility**: Slightly soluble

**Partition coefficient: n-octanol/water**: No data available

**Viscosity, kinematic**: No data available

**Relative vapor density**: No data available

**Evaporation rate**: No data available

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**SECTION 10: Stability and reactivity**

**Chemical stability**: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

**Hazardous reactions**: Hazardous reactions: Hazardous polymerization does not occur.

Further information: No decomposition if stored and applied as directed.

**Conditions to avoid**: No data available.

**Hazardous decomposition products**: Carbon oxides, Sulfur oxides

**Other data**: No decomposition if stored and applied as directed.

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**SECTION 11: Toxicological information**

**Diacel® Adjustable Spacer Viscosifier**

**Acute oral toxicity**: Acute toxicity estimate: > 5,000 mg/kg

**Diacel® Adjustable Spacer Viscosifier**

**Acute inhalation toxicity**: LC50: > 20 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: Estimated based on individual component values.

**Diacel® Adjustable Spacer Viscosifier**

**Acute dermal toxicity**: LD50: > 5,000 mg/kg

Method: Estimated based on individual component values.

**CMR effects**

Crystalline Silica: Carcinogenicity: Positive evidence from human epidemiological studies (inhalation)

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Further information
Crystalline Silica : Chronic Health Hazard.

SECTION 12: Ecological information

Biodegradability : This material is expected to be readily biodegradable.

Elimination information (persistence and degradability)
Additional ecological information : This material is not expected to be harmful to aquatic organisms.

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : This material is not expected to be harmful to aquatic organisms.
Long-term (chronic) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR
TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
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

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Carcinogenicity

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

CERCLA Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.
Formaldehyde

SARA 302 Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.
Formaldehyde

SARA 302 Threshold Planning Quantity : The following components are subject to reporting levels established by SARA Title III, Section 302:
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 304 Reportable Quantity</td>
<td>This material does not contain any components with a section 304 EHS RQ.</td>
</tr>
<tr>
<td>SARA 313 Components</td>
<td>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.</td>
</tr>
</tbody>
</table>

**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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations**

Pennsylvania Right To Know: Sodium Sulfate - 7757-82-6

New Jersey Right To Know: Crystalline Silica - 14808-60-7

California Prop. 65 Components: WARNING! This product contains a chemical known in the State of California to cause cancer.

**Notification status**

Europe - REACH: A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.

Switzerland - CH INV: Not in compliance with the inventory

United States of America (USA): On or in compliance with the active portion of the
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TSCA
Canada DSL: This product contains one or several components that are not on the Canadian DSL nor NDSL.
Australia AICS: On the inventory, or in compliance with the inventory
New Zealand NZIoC: Not in compliance with the inventory
Japan ENCS: Not in compliance with the inventory
Korea KECI: A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines PICCS: Not in compliance with the inventory
China IECSC: Not in compliance with the inventory
Taiwan TCSI: Not in compliance with the inventory

SECTION 16: Other information

NFPA Classification: Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0

Further information
Legacy SDS Number: CPC00418

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>AICS</td>
</tr>
<tr>
<td>DSL</td>
</tr>
<tr>
<td>NDSL</td>
</tr>
<tr>
<td>CNS</td>
</tr>
<tr>
<td>CAS</td>
</tr>
<tr>
<td>EC50</td>
</tr>
</tbody>
</table>

SDS Number:100000014403

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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
</tr>
</tbody>
</table>