HALLIBURTON

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

DCA-25013

Revision Date: 09-Sep-2014 Revision Number: 2

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

1.1. Product Identifier

Product Name DCA-25013 Internal ID Code HM007873

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Additive

Sector of use SU2 - Mining, (including offshore industries)
Product category PC32 - Polymer Mixtures and Compounds

Process categories PROC4 - Use in batch and other process (synthesis) where opportunity for exposure

arises

1.3. Details of the supplier of the safety data sheet

Halliburton Energy Services

Halliburton House, Howemoss Place

Kirkhill Industrial Estate

Dyce

Aberdeen, AB21 0GN United Kingdom

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

1.4. Emergency telephone number +44 8 08 189 0979 / 1-760-476-3961

| Emergency telephone - §45 | 5 - (EC)1272/2008 | | | |
|---------------------------|---|--|--|--|
| Europe | 112 | | | |
| Croatia | Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health) | | | |
| Cyprus | +210 7793777 | | | |
| Denmark | Poison Control Hotline (DK): +45 82 12 12 12 | | | |
| France | ORFILA (FR): + 01 45 42 59 59 | | | |
| Germany | Poison Center Berlin (DE): +49 030 30686 790 | | | |
| Italy | Poison Center, Milan (IT): +39 02 6610 1029 | | | |
| Netherlands | National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals) | | | |
| Norway | Poisons Information (NO):+ 47 22 591300 | | | |
| Poland | Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97 | | | |
| Romania | +40 21 318 36 06 | | | |
| Spain | Poison Information Service (ES): +34 91 562 04 20 | | | |
| United Kingdom | NHS Direct (UK): +44 0845 46 47 | | | |

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Not classified

2.2. Label Elements

Not classified

Hazard Pictograms

Signal Word None

Hazard Statements

Not Classified

Precautionary Statements - EU (§28, 1272/2008)

None

Contains

Substances CAS Number

Contains no hazardous substances in concentrations above N.

cut-off values according to the competent authority

2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients

3.2. Mixtures Mixture

| Substances | EINECS | CAS Number | PERCENT (w/w) | EU - CLP Substance Classification | REACH No. |
|--|--------|---------------|------------------|--------------------------------------|-------------------|
| Contains no hazardous substances in concentrations above cut-off values according to the competent authority | NA | NA | 60 - 100% | Not applicable | No data available |

For the full text of the H-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory

irritation develops or if breathing becomes difficult.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 15

minutes and get medical attention if irritation persists.

Skin Wash with soap and water. Get medical attention if irritation persists.

Ingestion Under normal conditions, first aid procedures are not required.

4.2. Most Important symptoms and effects, both acute and delayed

May cause mild eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

SECTION 5: Firefighting Measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards

Decomposition in fire may produce harmful gases. Spills produce extremely slippery surfaces.

5.3. Advice for firefighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Spills of this product are very slippery. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

Use appropriate protective equipment. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store away from oxidizers. Store in a cool, dry location. Product has a shelf life of 6 months.

7.3. Specific End Use(s)

Exposure Scenario No information available **Other Guidelines** No information available

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Exposure Limits

| Substances | CAS Number | EU | UK | Netherlands | France |
|-----------------------------|------------|----------------|----------------|----------------|----------------|
| Contains no hazardous | NA | Not applicable | Not applicable | Not applicable | Not applicable |
| substances in | | | | | |
| concentrations above | | | | | |
| cut-off values according to | | | | | |
| the competent authority | | | | | |

| Substances | CAS Number | Germany | Spain | Portugal | Finland |
|-----------------------------|------------|----------------|----------------|----------------|----------------|
| Contains no hazardous | NA | Not applicable | Not applicable | Not applicable | Not applicable |
| substances in | | | | | |
| concentrations above | | | | | |
| cut-off values according to | | | | | |
| the competent authority | | | | | |

| Substances | CAS Number | Austria | Ireland | Switzerland | Norway |
|-----------------------------|------------|----------------|----------------|----------------|----------------|
| Contains no hazardous | NA | Not applicable | Not applicable | Not applicable | Not applicable |
| substances in | | | | | |
| concentrations above | | | | | |
| cut-off values according to | | | | | |
| the competent authority | | | | | |

| Substances | CAS Number | Italy | Poland | Hungary | Czech Republic |
|-----------------------------|------------|----------------|----------------|----------------|----------------|
| Contains no hazardous | NA | Not applicable | Not applicable | Not applicable | Not applicable |
| substances in | | | | | |
| concentrations above | | | | | |
| cut-off values according to | | | | | |
| the competent authority | | | | | |

Substances **CAS Number** Denmark Romania Croatia Cyprus Contains no hazardous Not applicable Not applicable Not applicable Not applicable NΑ substances in concentrations above cut-off values according to the competent authority

Derived No Effect Level (DNEL)

No information available.

Worker

General Population

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Controls Use in a well ventilated area.

Personal protective equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection Not normally needed. But if significant exposures are possible then the following

respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

Hand Protection Impervious rubber gloves. Skin Protection Normal work coveralls.

Eye Protection Wear safety glasses or goggles to protect against exposure.

Other Precautions None known.

Environmental Exposure Controls Do not allow material to contaminate ground water system

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid Color: Yellowish

Odor: Odorless Odor Threshold: No information available

<u>Property</u> <u>Values</u>

Remarks/ - Method

pH: 4.2-5.5 Freezing Point/Range 0 °C

Melting Point/RangeNo data availableBoiling Point/Range100 °C / 212 °FFlash PointNo data available PMCC

Flammability (solid, gas)
upper flammability limit
lower flammability limit
No data available
Vapor Pressure
Vapor Density
No data available

Specific Gravity 1.072

Water Solubility Soluble in water No data available Solubility in other solvents Partition coefficient: n-octanol/water No data available **Autoignition Temperature** No data available No data available **Decomposition Temperature Viscosity** No data available **Explosive Properties** No information available **Oxidizing Properties** No information available

9.2. Other information

VOC Content (%) No data available

SECTION 10: Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

None anticipated

10.5. Incompatible Materials

Strong oxidizers.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide. Ammonia. Oxides of nitrogen.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

InhalationMay cause mild respiratory irritation.Eye ContactMay cause mild eye irritation.

Skin ContactNone known.IngestionNone known.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are

chronic health hazards.

Toxicology data for the components

| CAS Number | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------|-------------------|-------------------|-------------------|
| NA | No data available | No data available | No data available |

SECTION 12: Ecological Information

12.1. Toxicity Ecotoxicity Effects

| Substances | CAS | Toxicity to Algae | Toxicity to Fish | Toxicity to | Toxicity to |
|--|--------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Number | | - | Microorganisms | Invertebrates |
| Contains no hazardous substances in concentrations above cut-off values according to the competent authority | NA | No information available | No information available | No information available | No information available |

12.2. Persistence and degradability

Not readily biodegradable

| Substances | CAS Number | Persistence and Degradability |
|--|------------|-------------------------------|
| Contains no hazardous substances in | NA | No information available |
| concentrations above cut-off values according to | | |

| the competent authority | |
|-------------------------|--|
| and dempeterit demonty | |

12.3. Bioaccumulative potential

Does not bioaccumulate.

| Substances | CAS Number | Log Pow |
|--|------------|--------------------------|
| Contains no hazardous substances in | NA | No information available |
| concentrations above cut-off values according to | | |
| the competent authority | | |

12.4. Mobility in soil

| Substances | CAS Number | Mobility |
|--|------------|--------------------------|
| Contains no hazardous substances in concentrations | NA | No information available |
| above cut-off values according to the competent | | |
| authority | | |

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Disposal Method Contaminated Packaging Disposal should be made in accordance with federal, state, and local regulations.

Follow all applicable national or local regulations.

SECTION 14: Transport Information

IMDG/IMO

UN Number: Not restricted **UN Proper Shipping Name:** Not restricted **Transport Hazard Class(es):** Not applicable **Packing Group:** Not applicable **Environmental Hazards:** Not applicable

RID

UN Number: Not restricted **UN Proper Shipping Name:** Not restricted Transport Hazard Class(es): Not applicable **Packing Group:** Not applicable **Environmental Hazards:** Not applicable

ADR

UN Number: Not restricted **UN Proper Shipping Name:** Not restricted Transport Hazard Class(es): Not applicable Packing Group: Not applicable **Environmental Hazards:** Not applicable

IATA/ICAO

UN Number: Not restricted **UN Proper Shipping Name:** Not restricted Not applicable Transport Hazard Class(es): Not applicable **Packing Group: Environmental Hazards:** Not applicable

Not restricted 14.1. UN Number:

14.2. UN Proper Shipping Name: Not restricted

14.3. Transport Hazard Class(es): Not applicable

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14.4. Packing Group: Not applicable

14.5. Environmental Hazards: Not applicable

14.6. Special Precautions for User: None

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

EINECS Inventory This product, and all its components, complies with EINECS

US TSCA Inventory

All components listed on inventory or are exempt.

All components listed on inventory or are exempt.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering

Classes (WGK)

Not determined.

15.2. Chemical Safety Assessment

No information available

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3

None

Key or legend to abbreviations and acronyms

bw - body weight

CAS - Chemical Abstracts Service

CLP - REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification,

Labelling and Packaging of substances and mixtures

EC - European Commission

EC10 - Effective Concentration 10%

EC50 - Effective Concentration 50%

EEC - European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 - Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%

LL50 - Lethal Loading 50%

MARPOL - International Convention for the Prevention of Pollution from Ships

mg/kg - milligram/kilogram

mg/L - milligram/liter

NIOSH - National Institute for Occupational Safety and Health

NOEC - No Observed Effect Concentration

NTP - National Toxicology Program

OEL - Occupational Exposure Limit

PBT - Persistent Bioaccumulative and Toxic

PC - Chemical Product category

PEL - Permissible Exposure Limit

ppm - parts per million

PROC - Process category

REACH - REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the

Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL - Short Term Exposure Limit

SU - Sector of Use category

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 09-Sep-2014

Revision Note Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010

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End of Safety Data Sheet