

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

COMPONENT R

Revision Date: 05-Oct-2015

Revision Number: 16

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

1.1. Product Identifier

Product Name COMPONENT R
Internal ID Code HM000377

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

Recommended Use Component

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 - (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

Serious Eye Damage / Eye Irritation	Category 2 -H319
Reproductive Toxicity	Category 2 - H361

2.2. Label Elements

Hazard Pictograms

**Signal Word****Warning****Hazard Statements**

H319 - Causes serious eye irritation

H361 - Suspected of damaging fertility or the unborn child

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

P201 - Obtain special instructions before use

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/eye protection/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P501 - Dispose of contents/container to an approved landfill

Contains**Substances**

Potassium pentaborate, tetrahydrate

CAS Number

12229-13-9

2.3. Other Hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients**3.1. Substances**

Substance

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Potassium pentaborate, tetrahydrate	602-489-1	12229-13-9	60 - 100%	Eye Irrit. 2A (H319) Repr. 2 (H361)	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

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

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

Causes eye irritation Potential reproductive hazard. May cause birth defects.

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**

None - does not burn.

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**

None anticipated

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. Avoid creating and breathing dust. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

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

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**

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

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry location.

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
Potassium pentaborate, tetrahydrate	12229-13-9	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Potassium pentaborate, tetrahydrate	12229-13-9	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Potassium pentaborate, tetrahydrate	12229-13-9	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Potassium pentaborate, tetrahydrate	12229-13-9	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Potassium pentaborate,	12229-13-9	Not applicable	Not applicable	Not applicable	Not applicable

tetrahydrate					
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Derived No Effect Level (DNEL)

No information available.

WorkerGeneral 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

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

Hand Protection

Normal work 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:** Solid**Color:** White**Odor:** Odorless**Odor Threshold:** No information availablePropertyValuesRemarks/ - Method**pH:**

7.6-8.5

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

No data available

Flammability (solid, gas)

No data available

upper flammability limit

No data available

lower flammability limit

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.74

Water Solubility

Soluble in water

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

9.2. Other information**Molecular Weight**

293

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

Reducing agents.

10.6. Hazardous Decomposition Products

None known.

SECTION 11: Toxicological Information**11.1. Information on Toxicological Effects****Acute Toxicity****Inhalation**

May cause respiratory irritation.

Eye Contact

Causes eye irritation.

Skin Contact

Prolonged or repeated contact may cause slight skin irritation.

Ingestion

Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity

Prolonged or repeated exposure may cause reproductive system damage. Prolonged or repeated exposure may cause embryo and fetus toxicity.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium pentaborate, tetrahydrate	12229-13-9	3225 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	> 2.04 mg/L (Rat) 4h (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Potassium pentaborate, tetrahydrate	12229-13-9	Non-irritating to the skin (Rabbit) (similar substances)

Substances	CAS Number	Eye damage/irritation
Potassium pentaborate, tetrahydrate	12229-13-9	Causes moderate eye irritation. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Potassium pentaborate, tetrahydrate	12229-13-9	Did not cause sensitization on laboratory animals Patch Test 24 Hrs. on humans: No detectable irritation (similar substances)

Substances	CAS Number	Respiratory Sensitization
Potassium pentaborate, tetrahydrate	12229-13-9	No information available

Substances	CAS Number	Mutagenic Effects
Potassium pentaborate, tetrahydrate	12229-13-9	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Potassium pentaborate, tetrahydrate	12229-13-9	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Potassium pentaborate, tetrahydrate	12229-13-9	Experiments have shown reproductive toxicity effects on laboratory animals (similar substances)

Substances	CAS Number	STOT - single exposure
Potassium pentaborate, tetrahydrate	12229-13-9	None under normal use conditions

Substances	CAS Number	STOT - repeated exposure
Potassium pentaborate, tetrahydrate	12229-13-9	None under normal use conditions

Substances	CAS Number	Aspiration hazard
Potassium pentaborate, tetrahydrate	12229-13-9	No information available

SECTION 12: Ecological Information

12.1. Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Potassium pentaborate, tetrahydrate	12229-13-9	EC50 (72h) 220.3 mg/L (Skelettonema costatum)	LC50 (96h) > 100 mg/L (Scophthalmus maximus)	No information available	LC50 (48h) 133 mg/L (Daphnia magna Straus) LC50 (48h) 1395.6 mg/L (Arcatia tonsa)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Potassium pentaborate, tetrahydrate	12229-13-9	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Potassium pentaborate, tetrahydrate	12229-13-9	BCF < 500 L/kg

12.4. Mobility in soil

Substances	CAS Number	Mobility
Potassium pentaborate, tetrahydrate	12229-13-9	No information available

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
Potassium pentaborate, tetrahydrate	Not PBT/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

Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging

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
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

14.1. UN Number: Not restricted

14.2. UN Proper Shipping Name: Not restricted

14.3. Transport Hazard Class(es): Not applicable

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.
Canadian DSL Inventory	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/NDL - 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

H319 - Causes serious eye irritation

H361 - Suspected of damaging fertility or the unborn child

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/

OSHA

ECHA C&L

Revision Date: 05-Oct-2015

Revision Note

SDS sections updated: 1

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

Disclaimer Statement

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End of Safety Data Sheet