

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### C-TEK

Revision Date: 16-Sep-2015

Revision Number: 15

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

##### 1.1. Product Identifier

Product Name C-TEK  
Internal ID Code HM005268

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

**Recommended Use** THERMATEK Additive  
**Sector of use** SU2 - Mining, (including offshore industries)  
**Product category** PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific  
**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](http://www.halliburton.com)

For further information, please contact

**E-Mail address:** [fdunexchem@halliburton.com](mailto: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**

Not classified

**2.2. Label Elements**

Not classified

**Hazard Pictograms****Signal Word**

Not Hazardous

**Hazard Statements**

Not Classified

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

None

**Contains****Substances**

Inorganic chloride salt

**CAS Number**

Proprietary

**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.
Inorganic chloride salt	Listed	Proprietary	1 - 5%	Eye Irrit. 2A (H319)	01-2119494219-28

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

ACN No.	18-0000000373-81-0000
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**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

Under normal conditions, first aid procedures are not required.

**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.

**Ingestion**

Under normal conditions, first aid procedures are not required.

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

No significant hazards expected.

**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**

All standard fire fighting media

**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**

Not applicable.

**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. Avoid contact with skin, eyes and clothing. 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**

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**

Keep container closed when not in use.

**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
Inorganic chloride salt	Proprietary	Not applicable	10 mg/m <sup>3</sup>	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Inorganic chloride salt	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Inorganic chloride salt	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Inorganic chloride salt	Proprietary	Not applicable	Not applicable	Not applicable	TWA: 5 mg/m <sup>3</sup>

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Inorganic chloride salt	Proprietary	Not applicable	Not applicable	Not applicable	Not applicable

**Derived No Effect Level (DNEL)****Worker**

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Hazards for the eyes - local effects
Inorganic chloride salt	Not available	Not available	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	Not available	Not available	Not available	Not available	Not available

**General Population**

Substances	Long-term	Acute /	Long-term	Acute /	Long-term	Acute /	Long-term	Acute /	Long-term	Acute /	Hazards
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	exposure - systemic effects, Inhalation	short term exposure - systemic effects, Inhalation	exposure - local effects, Inhalation	short term exposure - local effects, Inhalation	exposure - systemic effects, Dermal	short term exposure - systemic effects, Dermal	exposure - local effects, Dermal	short term exposure - local effects, Dermal	exposure - systemic effects, Oral	short term exposure - local effects, Oral	for the eyes - local effects
Inorganic chloride salt	Not available	Not available	2.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Not available	Not available	Not available	Not available	Not available	Not available	Not available

**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 necessary.

**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:** Flake**Color:** White**Odor:** Odorless**Odor Threshold:** No information availablePropertyValues

Remarks/ - Method

**pH:**

8.2 (10%)

**Freezing Point/Range**

118 °C

**Melting Point/Range**

No data available

**Boiling Point/Range**

1412 °C / 2573 °F

**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**

&lt; 1

**Vapor Pressure**

15

**Vapor Density**

No data available

**Specific Gravity**

1.6

**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****VOC Content (%)**

No data available

**Bulk Density**40-60 lbs/ft<sup>3</sup> @ 20 C**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**

Contact with metals.

**10.6. Hazardous Decomposition Products**

Hydrogen chloride.

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

May cause mild respiratory irritation.

**Eye Contact**

May cause mild eye irritation.

**Skin Contact**

May cause mild skin irritation.

**Ingestion**

Large doses may cause nausea, vomiting and diarrhea.

**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**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Inorganic chloride salt	Proprietary	> 1000 mg/kg (Rat) 2301 mg/kg (Rat) > 2000 mg/kg (Rat) 2240 mg/kg (Rat)	5000 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Inorganic chloride salt		Causes mild skin irritation (Rabbit)

Substances	CAS Number	Eye damage/irritation
Inorganic chloride salt		Causes severe eye irritation. (Rabbit)

Substances	CAS Number	Skin Sensitization
Inorganic chloride salt		No information available

Substances	CAS Number	Respiratory Sensitization
Inorganic chloride salt		No information available

Substances	CAS Number	Mutagenic Effects
Inorganic chloride salt		Did not show mutagenic effects in animal experiments

Substances	CAS Number	Carcinogenic Effects
Inorganic chloride salt		No information available.

Substances	CAS Number	Reproductive toxicity
Inorganic chloride salt		Animal testing did not show any effects on fertility.

Substances	CAS Number	STOT - single exposure
Inorganic chloride salt		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Inorganic chloride salt		No information available.

Substances	CAS Number	Aspiration hazard
Inorganic chloride salt		Not applicable

## SECTION 12: Ecological Information

### 12.1. Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Inorganic chloride salt	Proprietary	ErC50 (72h) 2900 mg/L (Pseudokirchnerella subcapitata) ErC50 (72h) 4000 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 4630 mg/L (Pimephales promelas) LC50 (48h) >6560 mg/L (Pimephales promelas) LC50 (24h) >6660 mg/L (Pimephales promelas)	No information available	EC50 (48h) 2400 mg/L (Daphnia magna) EC50 (21d) 610 mg/L (reproduction) (Daphnia magna)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Inorganic chloride salt	Proprietary	The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Inorganic chloride salt	Proprietary	No information available

### 12.4. Mobility in soil

No information available

Substances	CAS Number	Mobility
Inorganic chloride salt	Proprietary	No information available

### 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).

Substances	PBT and vPvB assessment
Inorganic chloride salt	Not applicable

### 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
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<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

**IATA/ICAO**

<b>UN Number:</b>	Not restricted
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	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

<b>SECTION 15: Regulatory Information</b>
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**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

<b>EINECS Inventory</b>	This product, and all its components, complies with EINECS
<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>Canadian DSL Inventory</b>	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)** WGK 1: Low hazard to waters.

**15.2. Chemical Safety Assessment**

No information available

<b>SECTION 16: Other Information</b>
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**Full text of H-Statements referred to under sections 2 and 3**

H319 - Causes serious eye irritation

**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/](http://www.ChemADVISOR.com/)

NZ CCID

**Revision Date:** 16-Sep-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**