

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

POTASSIUM CHROMATE INDICATOR SOLUTION (51000, 51002)

Revision Date: 15-Sep-2015

Revision Number: 14

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

1.1. Product Identifier

Product Name POTASSIUM CHROMATE INDICATOR SOLUTION (51000, 51002)
Internal ID Code HM004001

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

Recommended Use Reagent

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

Acute Inhalation Toxicity - Vapors	Category 4 - H332
Serious Eye Damage / Eye Irritation	Category 2 - H319
Skin Sensitization	Category 1 - H317
Germ Cell Mutagenicity	Category 1 - H340
Carcinogenicity	Category 1A - H350

Chronic Aquatic Toxicity

Chronic 3 - H412

2.2. Label Elements**Hazard Pictograms****Signal Word****Danger****Hazard Statements**

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H340 - May cause genetic defects

H350 - May cause cancer

H412 - Harmful to aquatic life with long lasting effects

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

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

Contains**Substances**

Potassium chromate

CAS Number

7789-00-6

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.
Potassium chromate	232-140-5	7789-00-6	1 - 5%	Acute Tox. 3 (H301) Acute Tox. 2 (H330) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Skin Sens. 1 (H317) Muta. 1 (H340) Carc. 1A (H350) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	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, move victim to fresh air and seek medical attention.

Eyes	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

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

Harmful if inhaled. May cause allergic skin reaction. Potential carcinogen. Causes eye irritation May cause heritable genetic damage.

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**

Decomposition in fire may produce harmful gases.

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 contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

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

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. 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 away from reducing agents. Store away from combustibles. Store in a cool, dry location. 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
Potassium chromate	7789-00-6	Not applicable	0.05 mg/m ³	0,025 mg/m ³	0.05 mg/m ³

Substances	CAS Number	Germany	Spain	Portugal	Finland
Potassium chromate	7789-00-6	0,05 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.5 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Potassium chromate	7789-00-6	Not applicable	0.05 mg/m ³ TWA (water soluble, as Cr); 0.01 mg/m ³ TWA (insoluble, as Cr)	Not applicable	TWA: 0.005 mg/m ³ STEL: 0.015 mg/m ³

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Potassium chromate	7789-00-6	Not applicable	0.1 mg/m ³	TWA: 0.5 mg/m ³ STEL: 2 mg/m ³	0.05 mg/m ³

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Potassium chromate	7789-00-6	0.005 mg/m ³	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL)
Worker

No information available.

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

HEPA Respirator.

Hand Protection

Nitrile gloves.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

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
Odor: Odorless

Color: Yellow
Odor Threshold: No information available

Property
Remarks/ - Method

Values

pH:

3-4

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

1.04

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
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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

Organic matter. Reducing agents. Sulfuric acid.

10.6. Hazardous Decomposition Products

Chromates and oxides of chromium.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects**Acute Toxicity****Inhalation**

Harmful if inhaled. May cause mild respiratory irritation. Toxic by inhalation.

Eye Contact

Causes severe eye irritation.

Skin Contact

May cause an allergic skin reaction. Prolonged or repeated contact may cause slight skin irritation.

Ingestion

Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity

Contains hexavalent chromium, a suspected lung carcinogen. Prolonged or repeated exposure may cause liver, kidney and blood effects.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium chromate	7789-00-6	51.9 mg/kg (Rat) (similar substance)	960 mg/kg (Rabbit) (similar substance)	0.1 mg/L (Rat) 4 h (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Potassium chromate	7789-00-6	Skin, rabbit: Causes moderate skin irritation. (similar substances)

Substances	CAS Number	Eye damage/irritation
Potassium chromate	7789-00-6	Causes severe eye burns (human) (similar substances)

Substances	CAS Number	Skin Sensitization
Potassium chromate	7789-00-6	May cause sensitization by skin contact (similar substances)

Substances	CAS Number	Respiratory Sensitization
Potassium chromate	7789-00-6	No information available

Substances	CAS Number	Mutagenic Effects
Potassium chromate	7789-00-6	In vitro tests have shown mutagenic effects Some in vivo tests have shown mutagenic effects. (similar substances)

Substances	CAS	Carcinogenic Effects
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	Number	
Potassium chromate	7789-00-6	May cause cancer after repeated inhalation of spray or dust. (similar substances)
Substances	CAS Number	Reproductive toxicity
Potassium chromate	7789-00-6	Prolonged or repeated exposure may cause reproductive system damage.
Substances	CAS Number	STOT - single exposure
Potassium chromate	7789-00-6	May cause respiratory irritation. (similar substances)
Substances	CAS Number	STOT - repeated exposure
Potassium chromate	7789-00-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Substances	CAS Number	Aspiration hazard
Potassium chromate	7789-00-6	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
Potassium chromate	7789-00-6	NOEC (72h) 0.1 mg/L (Chlorella pyrenoidosa)	LC50 (96h) 17.6 mg/L (Pimephales promelas) NOEC (60d) 0.051 mg/L (Oncorhynchus mykiss)	No information available	LC50 (48h) 0.035 mg/L (Daphnia magna) NOEC (21d) 18 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Potassium chromate	7789-00-6	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Potassium chromate	7789-00-6	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Potassium chromate	7789-00-6	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).

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
 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.

Substances	CAS Number	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization
Potassium chromate	7789-00-6	Use restricted. See item 28. Use restricted. See item 29. Use restricted. See item 28. except Barium chromate and compounds specified elsewhere in Annex VI to Regulation [EC]	Carcinogenic Category 1B, Article 57 Mutagenic Category 1B, Article 57

		No 1272/2008 Use restricted. See item 47. leather articles and articles containing leather parts, see also exemptions, restrictions shall apply from May 1, 2015	
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15.2. Chemical Safety Assessment

No information available

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

H301 - Toxic if swallowed
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H319 - Causes serious eye irritation
 H330 - Fatal if inhaled
 H332 - Harmful if inhaled
 H340 - May cause genetic defects
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H412 - Harmful to aquatic life with long lasting effects

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: 15-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