

SAFETY DATA SHEET



Calibrated Solutions Kit, Part Number 9910085200

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

1.1 Product identifier

Product name	: Calibrated Solutions Kit, Part Number 9910085200
Part no. (chemical kit)	: 9910085200
Part no.	: Hexane Blank Not available.
	Water Blank Not available.
	Holmium Perchlorate Not available.
	Reference Cell
	Hexane Reference Cell Not available.
	Potassium Chloride Reference Cell Not available.
	Sodium Iodide Reference Cell Not available.
	Potassium Dichromate Reference Cell - 60 Not available.
	Potassium Dichromate Reference Cell - 600 Not available.
	Perchloric Acid Blank Not available.
	Sodium Nitrite Reference Cell Not available.
	Potassium Dichromate Reference Cell - 40 mg/L Not available.
	Potassium Dichromate Reference Cell - 120 mg/L Not available.

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

Material uses	: <input checked="" type="checkbox"/> Reagents and Standards for Analytical Chemistry Laboratory Use 12 sealed quartz cuvettes
	Hexane Blank 3 ml
	Water Blank 3 ml
	Holmium Perchlorate Reference Cell 3 ml
	Hexane Reference Cell 3 ml
	Potassium Chloride Reference Cell 3 ml
	Sodium Iodide Reference Cell 3 ml
	Potassium Dichromate Reference Cell - 60 3 ml
	Potassium Dichromate Reference Cell - 600 3 ml
	Perchloric Acid Blank 3 ml
	Sodium Nitrite Reference Cell 3 ml
	Potassium Dichromate Reference Cell - 40 mg/L 3 ml
	Potassium Dichromate Reference Cell - 120 mg/L 3 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Date of issue/Date of revision : 26/09/2018

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

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	:	Hexane Blank	Mono-constituent substance
		Water Blank	Mono-constituent substance
		Holmium Perchlorate	Mixture
		Reference Cell	
		Hexane Reference Cell	Mixture
		Potassium Chloride	Mixture
		Reference Cell	
		Sodium Iodide	Mixture
		Reference Cell	
		Potassium Dichromate	Mixture
		Reference Cell - 60	
		Potassium Dichromate	Mixture
		Reference Cell - 600	
		Perchloric Acid Blank	Mixture
		Sodium Nitrite	Mixture
		Reference Cell	
		Potassium Dichromate	Mixture
		Reference Cell - 40 mg/L	
		Potassium Dichromate	Mixture
		Reference Cell - 120 mg/L	

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Hexane Blank

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN CORROSION/IRRITATION - Category 2
H361f	REPRODUCTIVE TOXICITY (Fertility) - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
H304	ASPIRATION HAZARD - Category 1
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Holmium Perchlorate

Reference Cell

H272	OXIDISING LIQUIDS - Category 2
H314	SKIN CORROSION/IRRITATION - Category 1

Hexane Reference Cell

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN CORROSION/IRRITATION - Category 2
H361f	REPRODUCTIVE TOXICITY (Fertility) - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
H304	ASPIRATION HAZARD - Category 1
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Sodium Iodide Reference Cell

H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

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Sodium Nitrite Reference Cell

H302

ACUTE TOXICITY (oral) - Category 4

H400

SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1






Ingredients of unknown toxicity	: <input checked="" type="checkbox"/> Holmium Perchlorate Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Ingredients of unknown ecotoxicity	: Holmium Perchlorate Reference Cell	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

: <input checked="" type="checkbox"/> Hexane Blank	
Holmium Perchlorate Reference Cell	
Hexane Reference Cell	
Sodium Iodide Reference Cell	
Sodium Nitrite Reference Cell	

Signal word

: <input checked="" type="checkbox"/> Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell Potassium Dichromate	Danger No signal word. Danger Danger No signal word. Warning No signal word.
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	Reference Cell - 60	
	Potassium Dichromate	No signal word.
	Reference Cell - 600	
	Perchloric Acid Blank	No signal word.
	Sodium Nitrite	Warning
	Reference Cell	
	Potassium Dichromate	No signal word.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No signal word.
	Reference Cell - 120 mg/L	
Hazard statements	: Hexane Blank	H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H361f - Suspected of damaging fertility. H304 - May be fatal if swallowed and enters airways. H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate	H272 - May intensify fire; oxidiser.
	Reference Cell	
	Hexane Reference Cell	H314 - Causes severe skin burns and eye damage. H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H361f - Suspected of damaging fertility. H304 - May be fatal if swallowed and enters airways. H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects.
	Potassium Chloride	No known significant effects or critical hazards.
	Reference Cell	
	Sodium Iodide	H373 - May cause damage to organs through prolonged or repeated exposure.
	Reference Cell	H412 - Harmful to aquatic life with long lasting effects.
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 60	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 600	
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite	H302 - Harmful if swallowed.
	Reference Cell	
	Potassium Dichromate	H400 - Very toxic to aquatic life.
	Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 120 mg/L	
	L	
Precautionary statements	: Hexane Blank	P201 - Obtain special instructions before use. P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
Prevention	: Hexane Blank	Not applicable.
	Water Blank	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
	Holmium Perchlorate	P210 - Keep away from heat, hot surfaces, sparks, open
	Reference Cell	

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	flames and other ignition sources. No smoking. P220 - Keep away from clothing and other combustible materials.
Hexane Reference Cell	P201 - Obtain special instructions before use. P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P260 - Do not breathe vapour. Not applicable.
Potassium Chloride Reference Cell	
Sodium Iodide Reference Cell	P273 - Avoid release to the environment. P260 - Do not breathe vapour. Not applicable.
Potassium Dichromate Reference Cell - 60	Not applicable.
Potassium Dichromate Reference Cell - 600	Not applicable.
Perchloric Acid Blank	Not applicable.
Sodium Nitrite Reference Cell	P273 - Avoid release to the environment. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. Not applicable.
Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Response : Hexane Blank	P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Not applicable.
Water Blank	
Holmium Perchlorate Reference Cell	P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician. P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.
Hexane Reference Cell	P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Not applicable.
Potassium Chloride Reference Cell	
Sodium Iodide Reference Cell	P314 - Get medical attention if you feel unwell.
Potassium Dichromate Reference Cell - 60	Not applicable.
Potassium Dichromate Reference Cell - 600	Not applicable.
Perchloric Acid Blank	Not applicable.
Sodium Nitrite	P391 - Collect spillage.

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	Reference Cell	P301 + P312 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
	Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
	Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Storage	: Hexane Blank	P405 - Store locked up.
	Water Blank	Not applicable.
	Holmium Perchlorate Reference Cell	P405 - Store locked up.
	Hexane Reference Cell	P405 - Store locked up.
	Potassium Chloride Reference Cell	Not applicable.
	Sodium Iodide Reference Cell	Not applicable.
	Potassium Dichromate Reference Cell - 60	Not applicable.
	Potassium Dichromate Reference Cell - 600	Not applicable.
	Perchloric Acid Blank	Not applicable.
	Sodium Nitrite Reference Cell	Not applicable.
	Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
	Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Disposal	: Hexane Blank	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Water Blank	Not applicable.
	Holmium Perchlorate Reference Cell	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Hexane Reference Cell	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Potassium Chloride Reference Cell	Not applicable.
	Sodium Iodide Reference Cell	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Potassium Dichromate Reference Cell - 60	Not applicable.
	Potassium Dichromate Reference Cell - 600	Not applicable.
	Perchloric Acid Blank	Not applicable.
	Sodium Nitrite Reference Cell	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
	Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Hazardous ingredients	: Holmium Perchlorate Reference Cell	- perchloric acid
	Hexane Reference Cell	- n-hexane
	Sodium Iodide Reference Cell	- Sodium iodide
	Sodium Nitrite Reference Cell	- sodium nitrite

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Supplemental label elements	:	Hexane Blank	Not applicable.
		Water Blank	Not applicable.
		Holmium Perchlorate Reference Cell	Not applicable.
		Hexane Reference Cell	Not applicable.
		Potassium Chloride Reference Cell	Not applicable.
		Sodium Iodide Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 60	Not applicable.
		Potassium Dichromate Reference Cell - 600	Not applicable.
		Perchloric Acid Blank	Not applicable.
		Sodium Nitrite Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
		Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Hexane Blank	Not applicable.
		Water Blank	Not applicable.
		Holmium Perchlorate Reference Cell	Not applicable.
		Hexane Reference Cell	Not applicable.
		Potassium Chloride Reference Cell	Not applicable.
		Sodium Iodide Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 60	Not applicable.
		Potassium Dichromate Reference Cell - 600	Not applicable.
		Perchloric Acid Blank	Not applicable.
		Sodium Nitrite Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
		Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.

Special packaging requirements

Tactile warning of danger	:	Hexane Blank	Not applicable.
		Water Blank	Not applicable.
		Holmium Perchlorate Reference Cell	Not applicable.
		Hexane Reference Cell	Not applicable.
		Potassium Chloride Reference Cell	Not applicable.
		Sodium Iodide Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 60	Not applicable.
		Potassium Dichromate Reference Cell - 600	Not applicable.
		Perchloric Acid Blank	Not applicable.
		Sodium Nitrite Reference Cell	Not applicable.
		Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.

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Potassium Dichromate Reference Cell - 120 mg/L Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

Hexane Blank None known.
 Water Blank None known.
 Holmium Perchlorate Reference Cell Causes digestive tract burns.
 Hexane Reference Cell None known.
 Potassium Chloride Reference Cell None known.
 Sodium Iodide Reference Cell None known.
 Potassium Dichromate Reference Cell - 60 None known.
 Potassium Dichromate Reference Cell - 600 None known.
 Perchloric Acid Blank None known.
 Sodium Nitrite Reference Cell None known.
 Potassium Dichromate Reference Cell - 40 mg/L None known.
 Potassium Dichromate Reference Cell - 120 mg/L None known.

SECTION 3: Composition/information on ingredients

3.1 Substances

Hexane Blank Mono-constituent substance
 Water Blank Mono-constituent substance
 Holmium Perchlorate Reference Cell Mixture
 Hexane Reference Cell Mixture
 Potassium Chloride Reference Cell Mixture
 Sodium Iodide Reference Cell Mixture
 Potassium Dichromate Reference Cell - 60 Mixture
 Potassium Dichromate Reference Cell - 600 Mixture
 Perchloric Acid Blank Mixture
 Sodium Nitrite Reference Cell Mixture
 Potassium Dichromate Reference Cell - 40 mg/L Mixture
 Potassium Dichromate Reference Cell - 120 mg/L Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Hexane Blank n-Hexane	EC: 203-777-6 CAS: 110-54-3 Index: 601-037-00-0	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f (Fertility) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[A]
Water Blank Water	REACH #: Annex IV EC: 231-791-2	100	Not classified.	[A]

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SECTION 3: Composition/information on ingredients

Holmium Perchlorate Reference Cell Perchloric acid	CAS: 7732-18-5 EC: 231-512-4 CAS: 7601-90-3 Index: 017-006-00-4	≥10 - ≤25	Ox. Liq. 1, H271 Skin Corr. 1A, H314	[1]
Hexane Reference Cell n-Hexane	EC: 203-777-6 CAS: 110-54-3 Index: 601-037-00-0	≥90	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f (Fertility) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
Sodium Iodide Reference Cell Sodium iodide	EC: 231-679-3 CAS: 7681-82-5	<2.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT RE 1, H372 (thyroid) (oral) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Sodium Nitrite Reference Cell Sodium nitrite	EC: 231-555-9 CAS: 7632-00-0 Index: 007-010-00-4	≤10	Ox. Sol. 3, H272 Acute Tox. 3, H301 Aquatic Acute 1, H400 (M=1000) See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy
- [A] Constituent
- [B] Impurity
- [C] Stabilising additive

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Hexane Blank	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Water Blank	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Holmium Perchlorate Reference Cell	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

SECTION 4: First aid measures

Hexane Reference Cell	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Potassium Chloride Reference Cell	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Sodium Iodide Reference Cell	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
Potassium Dichromate Reference Cell - 60	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Potassium Dichromate Reference Cell - 600	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Perchloric Acid Blank	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Sodium Nitrite Reference Cell	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Potassium Dichromate Reference Cell - 40 mg/L	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Potassium Dichromate Reference Cell - 120 mg/L	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation : Hexane Blank	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Water Blank	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Holmium Perchlorate Reference Cell	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Hexane Reference Cell	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if

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	breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Potassium Chloride Reference Cell	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Sodium Iodide Reference Cell	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Potassium Dichromate Reference Cell - 60	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Potassium Dichromate Reference Cell - 600	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Perchloric Acid Blank	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Sodium Nitrite Reference Cell	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Potassium Dichromate Reference Cell - 40 mg/L	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Potassium Dichromate Reference Cell - 120 mg/L	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact : Hexane Blank	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Water Blank	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Holmium Perchlorate Reference Cell	Get medical attention immediately. Call a poison center or physician. Rinse immediately contaminated clothing and skin with plenty of water. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10

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minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Hexane Reference Cell
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Potassium Chloride Reference Cell
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Sodium Iodide Reference Cell
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Potassium Dichromate Reference Cell - 60
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Potassium Dichromate Reference Cell - 600
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Perchloric Acid Blank
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Sodium Nitrite Reference Cell
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Potassium Dichromate Reference Cell - 40 mg/L
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Potassium Dichromate Reference Cell - 120 mg/L
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

: Hexane Blank
Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Water Blank
Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Holmium Perchlorate Reference Cell
Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting

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	<p>occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Hexane Reference Cell	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Potassium Chloride Reference Cell	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Sodium Iodide Reference Cell	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Potassium Dichromate Reference Cell - 60	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Potassium Dichromate Reference Cell - 600	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Perchloric Acid Blank	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Sodium Nitrite Reference Cell	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities</p>

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of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Potassium Dichromate Reference Cell - 40 mg/L

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Potassium Dichromate Reference Cell - 120 mg/L

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : Hexane Blank

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Water Blank

No action shall be taken involving any personal risk or without suitable training.

Holmium Perchlorate Reference Cell

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Hexane Reference Cell

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Potassium Chloride Reference Cell

No action shall be taken involving any personal risk or without suitable training.

Sodium Iodide Reference Cell

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Potassium Dichromate Reference Cell - 60

No action shall be taken involving any personal risk or without suitable training.

Potassium Dichromate Reference Cell - 600

No action shall be taken involving any personal risk or without suitable training.

Perchloric Acid Blank

No action shall be taken involving any personal risk or without suitable training.

Sodium Nitrite Reference Cell

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Potassium Dichromate Reference Cell - 40 mg/L

No action shall be taken involving any personal risk or without suitable training.

Potassium Dichromate Reference Cell - 120 mg/L

No action shall be taken involving any personal risk or without suitable training.

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4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	:	Hexane Blank	No known significant effects or critical hazards.	
		Water Blank	No known significant effects or critical hazards.	
		Holmium Perchlorate Reference Cell	Causes serious eye damage.	
		Hexane Reference Cell	No known significant effects or critical hazards.	
		Potassium Chloride Reference Cell	No known significant effects or critical hazards.	
		Sodium Iodide Reference Cell	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.	
		Perchloric Acid Blank	No known significant effects or critical hazards.	
		Sodium Nitrite Reference Cell	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.	
	Inhalation	:	Hexane Blank	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
			Water Blank	No known significant effects or critical hazards.
			Holmium Perchlorate Reference Cell	No known significant effects or critical hazards.
			Hexane Reference Cell	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
			Potassium Chloride Reference Cell	No known significant effects or critical hazards.
			Sodium Iodide Reference Cell	No known significant effects or critical hazards.
			Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
		Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.	
		Perchloric Acid Blank	No known significant effects or critical hazards.	
		Sodium Nitrite Reference Cell	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.	
		Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.	
Skin contact		:	Hexane Blank	Causes skin irritation.
			Water Blank	No known significant effects or critical hazards.
			Holmium Perchlorate Reference Cell	Causes severe burns.
			Hexane Reference Cell	Causes skin irritation.
			Potassium Chloride Reference Cell	No known significant effects or critical hazards.
			Sodium Iodide Reference Cell	No known significant effects or critical hazards.
			Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
		Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.	

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	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite	No known significant effects or critical hazards.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 120 mg/L	
Ingestion	: Hexane Blank	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate	Corrosive to the digestive tract. Causes burns.
	Reference Cell	
	Hexane Reference Cell	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
	Potassium Chloride	No known significant effects or critical hazards.
	Reference Cell	
	Sodium Iodide	No known significant effects or critical hazards.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 60	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 600	
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite	Harmful if swallowed.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 120 mg/L	

Over-exposure signs/symptoms

Eye contact	: Hexane Blank	Adverse symptoms may include the following: pain or irritation watering redness
	Water Blank	No specific data.
	Holmium Perchlorate	Adverse symptoms may include the following:
	Reference Cell	pain watering redness
	Hexane Reference Cell	Adverse symptoms may include the following: pain or irritation watering redness
	Potassium Chloride	No specific data.
	Reference Cell	
	Sodium Iodide	No specific data.
	Reference Cell	
	Potassium Dichromate	No specific data.
	Reference Cell - 60	
	Potassium Dichromate	No specific data.
	Reference Cell - 600	
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite	No specific data.
	Reference Cell	
	Potassium Dichromate	No specific data.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No specific data.
	Reference Cell - 120 mg/L	

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Inhalation	: Hexane Blank	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	No specific data.
	Hexane Reference Cell	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
	L	
Skin contact	: Hexane Blank	Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Hexane Reference Cell	Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate	No specific data.

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	Reference Cell - 60	
	Potassium Dichromate	No specific data.
	Reference Cell - 600	
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite	No specific data.
	Reference Cell	
	Potassium Dichromate	No specific data.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No specific data.
	Reference Cell - 120 mg/L	
Ingestion	: Hexane Blank	Adverse symptoms may include the following: nausea or vomiting reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate	Adverse symptoms may include the following:
	Reference Cell	stomach pains
	Hexane Reference Cell	Adverse symptoms may include the following: nausea or vomiting reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride	No specific data.
	Reference Cell	
	Sodium Iodide	No specific data.
	Reference Cell	
	Potassium Dichromate	No specific data.
	Reference Cell - 60	
	Potassium Dichromate	No specific data.
	Reference Cell - 600	
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite	No specific data.
	Reference Cell	
	Potassium Dichromate	No specific data.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No specific data.
	Reference Cell - 120 mg/L	

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Hexane Blank	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Water Blank	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Holmium Perchlorate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Hexane Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Potassium Chloride	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Sodium Iodide	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Potassium Dichromate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Cell - 60	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Potassium Dichromate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reference Cell - 600	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Perchloric Acid Blank	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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	Sodium Nitrite Reference Cell	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Potassium Dichromate Reference Cell - 40 mg/L	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Potassium Dichromate Reference Cell - 120 mg/L	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Hexane Blank	No specific treatment.
	Water Blank	No specific treatment.
	Holmium Perchlorate Reference Cell	No specific treatment.
	Hexane Reference Cell	No specific treatment.
	Potassium Chloride Reference Cell	No specific treatment.
	Sodium Iodide Reference Cell	No specific treatment.
	Potassium Dichromate Reference Cell - 60	No specific treatment.
	Potassium Dichromate Reference Cell - 600	No specific treatment.
	Perchloric Acid Blank	No specific treatment.
	Sodium Nitrite Reference Cell	No specific treatment.
	Potassium Dichromate Reference Cell - 40 mg/L	No specific treatment.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Hexane Blank	Use dry chemical, CO ₂ , water spray (fog) or foam.
	Water Blank	Use an extinguishing agent suitable for the surrounding fire.
	Holmium Perchlorate Reference Cell	Use an extinguishing agent suitable for the surrounding fire.
	Hexane Reference Cell	Use dry chemical, CO ₂ , water spray (fog) or foam.
	Potassium Chloride Reference Cell	Use an extinguishing agent suitable for the surrounding fire.
	Sodium Iodide Reference Cell	Use an extinguishing agent suitable for the surrounding fire.
	Potassium Dichromate Reference Cell - 60	Use an extinguishing agent suitable for the surrounding fire.
	Potassium Dichromate Reference Cell - 600	Use an extinguishing agent suitable for the surrounding fire.
	Perchloric Acid Blank	Use an extinguishing agent suitable for the surrounding fire.
	Sodium Nitrite Reference Cell	Use an extinguishing agent suitable for the surrounding fire.
	Potassium Dichromate Reference Cell - 40 mg/L	Use an extinguishing agent suitable for the surrounding fire.
	Potassium Dichromate Reference Cell - 120 mg/L	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Hexane Blank	Do not use water jet.
	Water Blank	None known.
	Holmium Perchlorate Reference Cell	None known.
	Hexane Reference Cell	Do not use water jet.
	Potassium Chloride Reference Cell	None known.

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Sodium Iodide Reference Cell	None known.
Potassium Dichromate Reference Cell - 60	None known.
Potassium Dichromate Reference Cell - 600	None known.
Perchloric Acid Blank	None known.
Sodium Nitrite Reference Cell	None known.
Potassium Dichromate Reference Cell - 40 mg/L	None known.
Potassium Dichromate Reference Cell - 120 mg/L	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

Hexane Blank	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Water Blank	In a fire or if heated, a pressure increase will occur and the container may burst.
Holmium Perchlorate Reference Cell	Oxidising material. May intensify fire. In a fire or if heated, a pressure increase will occur and the container may burst.
Hexane Reference Cell	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Potassium Chloride Reference Cell	In a fire or if heated, a pressure increase will occur and the container may burst.
Sodium Iodide Reference Cell	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Potassium Dichromate Reference Cell - 60	In a fire or if heated, a pressure increase will occur and the container may burst.
Potassium Dichromate Reference Cell - 600	In a fire or if heated, a pressure increase will occur and the container may burst.
Perchloric Acid Blank	In a fire or if heated, a pressure increase will occur and the container may burst.
Sodium Nitrite Reference Cell	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Potassium Dichromate	In a fire or if heated, a pressure increase will occur and the

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	Reference Cell - 40 mg/L Potassium Dichromate	container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
	Reference Cell - 120 mg/L	
Hazardous combustion products	: Hexane Blank	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Decomposition products may include the following materials: halogenated compounds
	Hexane Reference Cell	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Potassium Chloride Reference Cell	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
	Sodium Iodide Reference Cell	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite Reference Cell	Decomposition products may include the following materials: nitrogen oxides metal oxide/oxides
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: Hexane Blank	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Water Blank	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Holmium Perchlorate Reference Cell	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Hexane Reference Cell	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Potassium Chloride Reference Cell	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Sodium Iodide Reference Cell	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be

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Potassium Dichromate Reference Cell - 60	taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Potassium Dichromate Reference Cell - 600	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Perchloric Acid Blank	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Sodium Nitrite Reference Cell	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Potassium Dichromate Reference Cell - 40 mg/L	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Potassium Dichromate Reference Cell - 120 mg/L	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters : Hexane Blank	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Water Blank	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Holmium Perchlorate Reference Cell	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Hexane Reference Cell	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Potassium Chloride Reference Cell	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Sodium Iodide Reference Cell	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Potassium Dichromate Reference Cell - 60	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Potassium Dichromate	Fire-fighters should wear appropriate protective equipment

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Reference Cell - 600	and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Perchloric Acid Blank	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Sodium Nitrite Reference Cell	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Potassium Dichromate Reference Cell - 40 mg/L	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Potassium Dichromate Reference Cell - 120 mg/L	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Hexane Blank	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Water Blank	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Holmium Perchlorate Reference Cell	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Hexane Reference Cell	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate

SECTION 6: Accidental release measures

		ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Potassium Chloride Reference Cell		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Sodium Iodide Reference Cell		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Potassium Dichromate Reference Cell - 60		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Potassium Dichromate Reference Cell - 600		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Perchloric Acid Blank		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Sodium Nitrite Reference Cell		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Potassium Dichromate Reference Cell - 40 mg/L		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Potassium Dichromate Reference Cell - 120 mg/L		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: Hexane Blank	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Water Blank	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Holmium Perchlorate Reference Cell	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Hexane Reference Cell	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-

SECTION 6: Accidental release measures

Potassium Chloride Reference Cell	emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Sodium Iodide Reference Cell	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Potassium Dichromate Reference Cell - 60	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Potassium Dichromate Reference Cell - 600	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Perchloric Acid Blank	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Sodium Nitrite Reference Cell	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Potassium Dichromate Reference Cell - 40 mg/L	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Potassium Dichromate Reference Cell - 120 mg/L	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Hexane Blank	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Water Blank	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Holmium Perchlorate Reference Cell	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Hexane Reference Cell	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Potassium Chloride Reference Cell	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Sodium Iodide Reference Cell	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution

SECTION 6: Accidental release measures

	(sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
Potassium Dichromate Reference Cell - 60	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Potassium Dichromate Reference Cell - 600	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Perchloric Acid Blank	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Sodium Nitrite Reference Cell	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Potassium Dichromate Reference Cell - 40 mg/L	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Potassium Dichromate Reference Cell - 120 mg/L	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Hexane Blank	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Water Blank	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Holmium Perchlorate Reference Cell	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Dispose of via a licensed waste disposal contractor.
Hexane Reference Cell	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Potassium Chloride Reference Cell	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Sodium Iodide	Stop leak if without risk. Move containers from spill area.

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Reference Cell	Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Potassium Dichromate Reference Cell - 60	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Potassium Dichromate Reference Cell - 600	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Perchloric Acid Blank	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Sodium Nitrite Reference Cell	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Potassium Dichromate Reference Cell - 40 mg/L	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Potassium Dichromate Reference Cell - 120 mg/L	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: Hexane Blank	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Water Blank	Put on appropriate personal protective equipment (see Section 8).

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Holmium Perchlorate Reference Cell	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from alkalis. Keep away from heat. Empty containers retain product residue and can be hazardous. Do not reuse container.
Hexane Reference Cell	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Potassium Chloride Reference Cell	Put on appropriate personal protective equipment (see Section 8).
Sodium Iodide Reference Cell	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Potassium Dichromate Reference Cell - 60	Put on appropriate personal protective equipment (see Section 8).
Potassium Dichromate Reference Cell - 600	Put on appropriate personal protective equipment (see Section 8).
Perchloric Acid Blank	Put on appropriate personal protective equipment (see Section 8).
Sodium Nitrite Reference Cell	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Potassium Dichromate Reference Cell - 40 mg/L	Put on appropriate personal protective equipment (see Section 8).
Potassium Dichromate Reference Cell - 120 mg/L	Put on appropriate personal protective equipment (see Section 8).

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Advice on general occupational hygiene

: Hexane Blank	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Water Blank	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Holmium Perchlorate Reference Cell	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Hexane Reference Cell	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Potassium Chloride Reference Cell	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Sodium Iodide Reference Cell	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Potassium Dichromate Reference Cell - 60	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Potassium Dichromate Reference Cell - 600	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Perchloric Acid Blank	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Sodium Nitrite Reference Cell	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Potassium Dichromate Reference Cell - 40 mg/L	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

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Potassium Dichromate
Reference Cell - 120 mg/
L

Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage

: Hexane Blank

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Water Blank

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Holmium Perchlorate
Reference Cell

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from alkalis. Separate from reducing agents and combustible materials. Store away from grease and oil. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Hexane Reference Cell

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Potassium Chloride
Reference Cell

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see

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	<p>Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Sodium Iodide Reference Cell	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Potassium Dichromate Reference Cell - 60	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Potassium Dichromate Reference Cell - 600	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Perchloric Acid Blank	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Sodium Nitrite Reference Cell	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Potassium Dichromate Reference Cell - 40 mg/L	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have</p>

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Potassium Dichromate
Reference Cell - 120 mg/
L

been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Hexane Blank P5c E2	5000 200	50000 500
Holmium Perchlorate Reference Cell P8	50	200
Hexane Reference Cell P5c E2	5000 200	50000 500
Sodium Nitrite Reference Cell E1	100	200

7.3 Specific end use(s)

Recommendations

Hexane Blank	Industrial applications, Professional applications.
Water Blank	Industrial applications, Professional applications.
Holmium Perchlorate Reference Cell	Industrial applications, Professional applications.
Hexane Reference Cell	Industrial applications, Professional applications.
Potassium Chloride Reference Cell	Industrial applications, Professional applications.
Sodium Iodide Reference Cell	Industrial applications, Professional applications.
Potassium Dichromate Reference Cell - 60	Industrial applications, Professional applications.
Potassium Dichromate Reference Cell - 600	Industrial applications, Professional applications.
Perchloric Acid Blank	Industrial applications, Professional applications.
Sodium Nitrite Reference Cell	Industrial applications, Professional applications.
Potassium Dichromate Reference Cell - 40 mg/L	Industrial applications, Professional applications.
Potassium Dichromate Reference Cell - 120 mg/L	Industrial applications, Professional applications.

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Industrial sector specific solutions	: Hexane Blank	Not applicable.
	Water Blank	Not applicable.
	Holmium Perchlorate	Not applicable.
	Reference Cell	
	Hexane Reference Cell	Not applicable.
	Potassium Chloride	Not applicable.
	Reference Cell	
	Sodium Iodide	Not applicable.
	Reference Cell	
	Potassium Dichromate	Not applicable.
	Reference Cell - 60	
	Potassium Dichromate	Not applicable.
	Reference Cell - 600	
	Perchloric Acid Blank	Not applicable.
	Sodium Nitrite	Not applicable.
	Reference Cell	
Potassium Dichromate	Not applicable.	
Reference Cell - 40 mg/L		
Potassium Dichromate	Not applicable.	
Reference Cell - 120 mg/L		

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Hexane Blank n-Hexane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 72 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.
Hexane Reference Cell n-Hexane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 72 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	Hexane Blank	Liquid.
		Water Blank	Liquid. [Clear.]
		Holmium Perchlorate Reference Cell	Liquid.
		Hexane Reference Cell	Liquid.
		Potassium Chloride Reference Cell	Liquid.
		Sodium Iodide Reference Cell	Liquid.
		Potassium Dichromate Reference Cell - 60	Liquid.
		Potassium Dichromate Reference Cell - 600	Liquid.

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	Perchloric Acid Blank	Liquid.
	Sodium Nitrite	Liquid.
	Reference Cell	
	Potassium Dichromate	Liquid.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Liquid.
	Reference Cell - 120 mg/L	
Colour	: Hexane Blank	Colourless.
	Water Blank	Colourless.
	Holmium Perchlorate	Transparent
	Reference Cell	
	Hexane Reference Cell	Transparent
	Potassium Chloride	Transparent
	Reference Cell	
	Sodium Iodide	Transparent
	Reference Cell	
	Potassium Dichromate	Transparent
	Reference Cell - 60	
	Potassium Dichromate	Transparent
	Reference Cell - 600	
	Perchloric Acid Blank	Transparent
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Odour	: Hexane Blank	Gasoline-like [Slight]
	Water Blank	Odourless.
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Odour threshold	: Hexane Blank	65 to 248 ppm
	Water Blank	Not available.
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.

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SECTION 9: Physical and chemical properties

	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
pH	: Hexane Blank	Not available.
	Water Blank	7
	Holmium Perchlorate	<2
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Melting point/freezing point	: Hexane Blank	-95.35°C
	Water Blank	0°C
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	-95°C
	Potassium Chloride	0°C
	Reference Cell	
	Sodium Iodide	0°C
	Reference Cell	
	Potassium Dichromate	0°C
	Reference Cell - 60	
	Potassium Dichromate	0°C
	Reference Cell - 600	
	Perchloric Acid Blank	0°C
	Sodium Nitrite	0°C
	Reference Cell	
	Potassium Dichromate	0°C
	Reference Cell - 40 mg/L	
	Potassium Dichromate	0°C
	Reference Cell - 120 mg/L	

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SECTION 9: Physical and chemical properties

Initial boiling point and boiling range	:	Hexane Blank	68.73°C	
		Water Blank	100°C	
		Holmium Perchlorate Reference Cell	Not available.	
		Hexane Reference Cell	69°C	
		Potassium Chloride Reference Cell	100°C	
		Sodium Iodide Reference Cell	100°C	
		Potassium Dichromate Reference Cell - 60	100°C	
		Potassium Dichromate Reference Cell - 600	100°C	
		Perchloric Acid Blank	100°C	
		Sodium Nitrite Reference Cell	100°C	
		Potassium Dichromate Reference Cell - 40 mg/L	100°C	
		Potassium Dichromate Reference Cell - 120 mg/L	100°C	
	Flash point	:	Hexane Blank	Closed cup: -23°C
			Water Blank	Not available.
			Holmium Perchlorate Reference Cell	Not available.
			Hexane Reference Cell	Closed cup: -23°C
			Potassium Chloride Reference Cell	Not available.
			Sodium Iodide Reference Cell	Not available.
			Potassium Dichromate Reference Cell - 60	Not available.
		Potassium Dichromate Reference Cell - 600	Not available.	
		Perchloric Acid Blank	Not available.	
		Sodium Nitrite Reference Cell	Not available.	
		Potassium Dichromate Reference Cell - 40 mg/L	Not available.	
		Potassium Dichromate Reference Cell - 120 mg/L	Not available.	
Evaporation rate		:	Hexane Blank	6.82 (butyl acetate = 1)
			Water Blank	Not available.
			Holmium Perchlorate Reference Cell	Not available.
			Hexane Reference Cell	9 (butyl acetate = 1)
			Potassium Chloride Reference Cell	Not available.
			Sodium Iodide Reference Cell	Not available.
			Potassium Dichromate Reference Cell - 60	Not available.
		Potassium Dichromate Reference Cell - 600	Not available.	
		Perchloric Acid Blank	Not available.	
		Sodium Nitrite Reference Cell	Not available.	
		Potassium Dichromate Reference Cell - 40 mg/L	Not available.	

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SECTION 9: Physical and chemical properties

	L	
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.
Flammability (solid, gas)	: Hexane Blank	Not applicable.
	Water Blank	Not applicable.
	Holmium Perchlorate Reference Cell	Not applicable.
	Hexane Reference Cell	Not applicable.
	Potassium Chloride Reference Cell	Not applicable.
	Sodium Iodide Reference Cell	Not applicable.
	Potassium Dichromate Reference Cell - 60	Not applicable.
	Potassium Dichromate Reference Cell - 600	Not applicable.
	Perchloric Acid Blank	Not applicable.
	Sodium Nitrite Reference Cell	Not applicable.
	Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
	Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Upper/lower flammability or explosive limits	: Hexane Blank	Lower: 1.2% Upper: 7.7%
	Water Blank	Not available.
	Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	Lower: 1.2% Upper: 7.7%
	Potassium Chloride Reference Cell	Not available.
	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.
Vapour pressure	: Hexane Blank	17 kPa [room temperature]
	Water Blank	2337.8 kPa [room temperature]
	Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	Not available.
	Potassium Chloride Reference Cell	Not available.
	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.

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SECTION 9: Physical and chemical properties

	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.
Vapour density	: Hexane Blank	3 [Air = 1]
	Water Blank	0.62 [Air = 1]
	Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	3 [Air = 1]
	Potassium Chloride Reference Cell	Not available.
	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.
Relative density	: Hexane Blank	0.7
	Water Blank	1
	Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	Not available.
	Potassium Chloride Reference Cell	Not available.
	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.

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SECTION 9: Physical and chemical properties

Solubility(ies)	: Hexane Blank	Soluble in the following materials: methanol, diethyl ether and acetone. Insoluble in the following materials: cold water and hot water.	
	Water Blank	Easily soluble in the following materials: cold water and hot water.	
	Holmium Perchlorate Reference Cell	Easily soluble in the following materials: cold water and hot water.	
	Hexane Reference Cell	Insoluble in the following materials: cold water and hot water.	
	Potassium Chloride Reference Cell	Easily soluble in the following materials: cold water and hot water.	
	Sodium Iodide Reference Cell	Easily soluble in the following materials: cold water and hot water.	
	Potassium Dichromate Reference Cell - 60	Easily soluble in the following materials: cold water and hot water.	
	Potassium Dichromate Reference Cell - 600	Easily soluble in the following materials: cold water and hot water.	
	Perchloric Acid Blank	Easily soluble in the following materials: cold water and hot water.	
	Sodium Nitrite Reference Cell	Easily soluble in the following materials: cold water and hot water.	
	Potassium Dichromate Reference Cell - 40 mg/L	Easily soluble in the following materials: cold water and hot water.	
	Potassium Dichromate Reference Cell - 120 mg/L	Easily soluble in the following materials: cold water and hot water.	
	Partition coefficient: n-octanol/water	: Hexane Blank	4
		Water Blank	-1.38
		Holmium Perchlorate Reference Cell	Not available.
Hexane Reference Cell		Not available.	
Potassium Chloride Reference Cell		Not available.	
Sodium Iodide Reference Cell		Not available.	
Potassium Dichromate Reference Cell - 60		Not available.	
Potassium Dichromate Reference Cell - 600		Not available.	
Perchloric Acid Blank		Not available.	
Sodium Nitrite Reference Cell		Not available.	
Potassium Dichromate Reference Cell - 40 mg/L		Not available.	
Potassium Dichromate Reference Cell - 120 mg/L		Not available.	
Auto-ignition temperature		: Hexane Blank	225°C
		Water Blank	Not available.
		Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	Not available.	
	Potassium Chloride Reference Cell	Not available.	
	Sodium Iodide Reference Cell	Not available.	
	Potassium Dichromate Reference Cell - 60	Not available.	
	Potassium Dichromate Reference Cell - 600	Not available.	
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.	

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SECTION 9: Physical and chemical properties

	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Decomposition temperature	Hexane Blank	Not available.
	Water Blank	>1200°C
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Viscosity	Hexane Blank	Dynamic (room temperature): 0.3 mPa·s
	Water Blank	Not available.
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	
Explosive properties	Hexane Blank	Not available.
	Water Blank	Not available.
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Not available.
	Potassium Chloride	Not available.
	Reference Cell	

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SECTION 9: Physical and chemical properties

	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.
Oxidising properties	: Hexane Blank	Not available.
	Water Blank	Not available.
	Holmium Perchlorate Reference Cell	Not available.
	Hexane Reference Cell	Not available.
	Potassium Chloride Reference Cell	Not available.
	Sodium Iodide Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 60	Not available.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.
	Sodium Nitrite Reference Cell	Not available.
	Potassium Dichromate Reference Cell - 40 mg/L	Not available.
	Potassium Dichromate Reference Cell - 120 mg/L	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Hexane Blank	No specific test data related to reactivity available for this product or its ingredients.
	Water Blank	No specific test data related to reactivity available for this product or its ingredients.
	Holmium Perchlorate Reference Cell	No specific test data related to reactivity available for this product or its ingredients.
	Hexane Reference Cell	No specific test data related to reactivity available for this product or its ingredients.
	Potassium Chloride Reference Cell	No specific test data related to reactivity available for this product or its ingredients.
	Sodium Iodide Reference Cell	No specific test data related to reactivity available for this product or its ingredients.
	Potassium Dichromate Reference Cell - 60	No specific test data related to reactivity available for this product or its ingredients.
	Potassium Dichromate Reference Cell - 600	No specific test data related to reactivity available for this product or its ingredients.
	Perchloric Acid Blank	No specific test data related to reactivity available for this product or its ingredients.

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SECTION 10: Stability and reactivity

Sodium Nitrite Reference Cell	No specific test data related to reactivity available for this product or its ingredients.
Potassium Dichromate Reference Cell - 40 mg/L	No specific test data related to reactivity available for this product or its ingredients.
Potassium Dichromate Reference Cell - 120 mg/L	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

: Hexane Blank	The product is stable.
Water Blank	The product is stable.
Holmium Perchlorate Reference Cell	The product is stable.
Hexane Reference Cell	The product is stable.
Potassium Chloride Reference Cell	The product is stable.
Sodium Iodide Reference Cell	The product is stable.
Potassium Dichromate Reference Cell - 60	The product is stable.
Potassium Dichromate Reference Cell - 600	The product is stable.
Perchloric Acid Blank	The product is stable.
Sodium Nitrite Reference Cell	The product is stable.
Potassium Dichromate Reference Cell - 40 mg/L	The product is stable.
Potassium Dichromate Reference Cell - 120 mg/L	The product is stable.

10.3 Possibility of hazardous reactions

: Hexane Blank	Under normal conditions of storage and use, hazardous reactions will not occur.
Water Blank	Under normal conditions of storage and use, hazardous reactions will not occur.
Holmium Perchlorate Reference Cell	Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials Reactions may include the following: risk of causing or intensifying fire
Hexane Reference Cell	Under normal conditions of storage and use, hazardous reactions will not occur.
Potassium Chloride Reference Cell	Under normal conditions of storage and use, hazardous reactions will not occur.
Sodium Iodide Reference Cell	Under normal conditions of storage and use, hazardous reactions will not occur.
Potassium Dichromate Reference Cell - 60	Under normal conditions of storage and use, hazardous reactions will not occur.
Potassium Dichromate Reference Cell - 600	Under normal conditions of storage and use, hazardous reactions will not occur.
Perchloric Acid Blank	Under normal conditions of storage and use, hazardous reactions will not occur.
Sodium Nitrite Reference Cell	Under normal conditions of storage and use, hazardous reactions will not occur.
Potassium Dichromate Reference Cell - 40 mg/L	Under normal conditions of storage and use, hazardous reactions will not occur.
Potassium Dichromate Reference Cell - 120 mg/L	Under normal conditions of storage and use, hazardous reactions will not occur.

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SECTION 10: Stability and reactivity

10.4 Conditions to avoid	: Hexane Blank	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Drying on clothing or other combustible materials may cause fire.
	Hexane Reference Cell	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
10.5 Incompatible materials	: Hexane Blank	Reactive or incompatible with the following materials: oxidizing materials
	Water Blank	May react or be incompatible with oxidising materials.
	Holmium Perchlorate Reference Cell	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis combustible materials reducing materials
	Hexane Reference Cell	Reactive or incompatible with the following materials: oxidizing materials
	Potassium Chloride Reference Cell	May react or be incompatible with oxidising materials.
	Sodium Iodide Reference Cell	May react or be incompatible with oxidising materials.
	Potassium Dichromate Reference Cell - 60	May react or be incompatible with oxidising materials.
	Potassium Dichromate Reference Cell - 600	May react or be incompatible with oxidising materials.
	Perchloric Acid Blank	May react or be incompatible with oxidising materials.
	Sodium Nitrite Reference Cell	May react or be incompatible with oxidising materials.
	Potassium Dichromate Reference Cell - 40 mg/L	May react or be incompatible with oxidising materials.
	Potassium Dichromate Reference Cell - 120 mg/L	May react or be incompatible with oxidising materials.

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SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products	: Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell Potassium Dichromate Reference Cell - 60 Potassium Dichromate Reference Cell - 600 Perchloric Acid Blank Sodium Nitrite Reference Cell Potassium Dichromate Reference Cell - 40 mg/L Potassium Dichromate Reference Cell - 120 mg/L	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexane Blank n-Hexane	LC50 Inhalation Vapour	Rat - Male, Female	>31.86 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
Holmium Perchlorate Reference Cell Perchloric acid	LD50 Oral	Rat	1100 mg/kg	-
Hexane Reference Cell n-Hexane	LC50 Inhalation Vapour	Rat - Male, Female	>31.86 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
Sodium Iodide Reference Cell Sodium iodide	LD50 Oral	Rat	4340 mg/kg	-
Sodium Nitrite Reference Cell Sodium nitrite	LC50 Inhalation Dusts and mists	Rat	5.5 mg/l	4 hours

Acute toxicity estimates

Route	ATE value
Sodium Nitrite Reference Cell Oral	1700 mg/kg

Irritation/Corrosion

Date of issue/Date of revision : 26/09/2018

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SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexane Blank n-Hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
Hexane Reference Cell n-Hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
Sodium Iodide Reference Cell Sodium iodide	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Sodium Nitrite Reference Cell Sodium nitrite	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Hexane Blank n-Hexane	Category 3	Not applicable.	Narcotic effects
Hexane Reference Cell n-Hexane	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Hexane Blank n-Hexane	Category 2	Not determined	Not determined
Hexane Reference Cell n-Hexane	Category 2	Not determined	Not determined
Sodium Iodide Reference Cell Sodium iodide	Category 1	Oral	thyroid

Aspiration hazard

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SECTION 11: Toxicological information

Product/ingredient name	Result
Hexane Blank n-Hexane	ASPIRATION HAZARD - Category 1
Hexane Reference Cell Hexane Reference Cell n-Hexane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes of exposure	:	Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell Potassium Dichromate Reference Cell - 60 Potassium Dichromate Reference Cell - 600 Perchloric Acid Blank Sodium Nitrite Reference Cell Potassium Dichromate Reference Cell - 40 mg/L Potassium Dichromate Reference Cell - 120 mg/L	Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Not available.
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Potential acute health effects

Inhalation	:	Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell Potassium Dichromate Reference Cell - 60 Potassium Dichromate Reference Cell - 600 Perchloric Acid Blank Sodium Nitrite Reference Cell Potassium Dichromate Reference Cell - 40 mg/L Potassium Dichromate Reference Cell - 120 mg/L	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. No known significant effects or critical hazards. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	:	Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. No known significant effects or critical hazards. Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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SECTION 11: Toxicological information

	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite Reference Cell	Harmful if swallowed.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Skin contact	: Hexane Blank	Causes skin irritation.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate Reference Cell	Causes severe burns.
	Hexane Reference Cell	Causes skin irritation.
	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Eye contact	: Hexane Blank	No known significant effects or critical hazards.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate Reference Cell	Causes serious eye damage.
	Hexane Reference Cell	No known significant effects or critical hazards.
	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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SECTION 11: Toxicological information

Inhalation	: Hexane Blank	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	No specific data.
	Hexane Reference Cell	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
Ingestion	: Hexane Blank	Adverse symptoms may include the following: nausea or vomiting reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Adverse symptoms may include the following: stomach pains
	Hexane Reference Cell	Adverse symptoms may include the following: nausea or vomiting reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite	No specific data.

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SECTION 11: Toxicological information

	Reference Cell	
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
Skin contact	: Hexane Blank	Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Hexane Reference Cell	Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 600	No specific data.
	Perchloric Acid Blank	No specific data.
	Sodium Nitrite Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
Eye contact	: Hexane Blank	Adverse symptoms may include the following: pain or irritation watering redness
	Water Blank	No specific data.
	Holmium Perchlorate Reference Cell	Adverse symptoms may include the following: pain watering redness
	Hexane Reference Cell	Adverse symptoms may include the following: pain or irritation watering redness
	Potassium Chloride Reference Cell	No specific data.
	Sodium Iodide Reference Cell	No specific data.
	Potassium Dichromate Reference Cell - 60	No specific data.
	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.

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SECTION 11: Toxicological information

Reference Cell - 600	
Perchloric Acid Blank	No specific data.
Sodium Nitrite	No specific data.
Reference Cell	
Potassium Dichromate	No specific data.
Reference Cell - 40 mg/L	
Potassium Dichromate	No specific data.
Reference Cell - 120 mg/L	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	Hexane Blank	May cause damage to organs through prolonged or repeated exposure.
		Water Blank	No known significant effects or critical hazards.
		Holmium Perchlorate	No known significant effects or critical hazards.
		Reference Cell	
		Hexane Reference Cell	May cause damage to organs through prolonged or repeated exposure.
		Potassium Chloride	No known significant effects or critical hazards.
		Reference Cell	
		Sodium Iodide	May cause damage to organs through prolonged or repeated exposure.
		Reference Cell	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 60	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 600	
		Perchloric Acid Blank	No known significant effects or critical hazards.
		Sodium Nitrite	No known significant effects or critical hazards.
		Reference Cell	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 40 mg/L	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 120 mg/L	
Carcinogenicity	:	Hexane Blank	No known significant effects or critical hazards.
		Water Blank	No known significant effects or critical hazards.
		Holmium Perchlorate	No known significant effects or critical hazards.
		Reference Cell	
		Hexane Reference Cell	No known significant effects or critical hazards.
		Potassium Chloride	No known significant effects or critical hazards.
		Reference Cell	
		Sodium Iodide	No known significant effects or critical hazards.
		Reference Cell	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 60	
		Potassium Dichromate	No known significant effects or critical hazards.
		Reference Cell - 600	
		Perchloric Acid Blank	No known significant effects or critical hazards.

SECTION 11: Toxicological information

	Sodium Nitrite Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Mutagenicity	: Hexane Blank	No known significant effects or critical hazards.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate Reference Cell	No known significant effects or critical hazards.
	Hexane Reference Cell	No known significant effects or critical hazards.
	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Teratogenicity	: Hexane Blank	No known significant effects or critical hazards.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate Reference Cell	No known significant effects or critical hazards.
	Hexane Reference Cell	No known significant effects or critical hazards.
	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 600	No known significant effects or critical hazards.
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 40 mg/L	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Developmental effects	: Hexane Blank	No known significant effects or critical hazards.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate Reference Cell	No known significant effects or critical hazards.
	Hexane Reference Cell	No known significant effects or critical hazards.
	Potassium Chloride Reference Cell	No known significant effects or critical hazards.
	Sodium Iodide Reference Cell	No known significant effects or critical hazards.
	Potassium Dichromate Reference Cell - 60	No known significant effects or critical hazards.
	Potassium Dichromate	No known significant effects or critical hazards.

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SECTION 11: Toxicological information

	Reference Cell - 600	
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite	No known significant effects or critical hazards.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 120 mg/L	
Fertility effects	: Hexane Blank	Suspected of damaging fertility.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate	No known significant effects or critical hazards.
	Reference Cell	
	Hexane Reference Cell	Suspected of damaging fertility.
	Potassium Chloride	No known significant effects or critical hazards.
	Reference Cell	
	Sodium Iodide	No known significant effects or critical hazards.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 60	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 600	
	Perchloric Acid Blank	No known significant effects or critical hazards.
	Sodium Nitrite	No known significant effects or critical hazards.
	Reference Cell	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	No known significant effects or critical hazards.
	Reference Cell - 120 mg/L	
Other information	: Hexane Blank	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
	Water Blank	Not available.
	Holmium Perchlorate	Not available.
	Reference Cell	
	Hexane Reference Cell	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
	Potassium Chloride	Not available.
	Reference Cell	
	Sodium Iodide	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 60	
	Potassium Dichromate	Not available.
	Reference Cell - 600	
	Perchloric Acid Blank	Not available.
	Sodium Nitrite	Not available.
	Reference Cell	
	Potassium Dichromate	Not available.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not available.
	Reference Cell - 120 mg/L	

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SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hexane Blank n-Hexane	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Holmium Perchlorate Reference Cell Perchloric acid	Acute EC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Hexane Reference Cell n-Hexane	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Sodium Iodide Reference Cell Sodium iodide	Acute LC50 0.17 mg/l Fresh water Acute LC50 860 mg/l Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss - Fry	48 hours 96 hours
Sodium Nitrite Reference Cell Sodium nitrite	Acute EC50 159000 µg/l Marine water Acute EC50 1600000 µg/l Marine water Acute LC50 1100 µg/l Fresh water Acute LC50 0.16 µg/l Fresh water Chronic NOEC 0.912 mg/l Marine water	Algae - Tetraselmis chuii Algae - Tetraselmis chuii Crustaceans - Cherax quadricarinatus Fish - Ictalurus punctatus - Fingerling Fish - Hippocampus abdominalis - Juvenile (Fledgling, Hatchling, Weanling)	72 hours 96 hours 48 hours 96 hours 35 days

12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Water Blank Water	-	-	Readily
Sodium Nitrite Reference Cell Sodium nitrite	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Hexane Blank n-Hexane	4	501.187	high
Water Blank Water Blank	-1.38	-	low
Water	-1.38	-	low
Holmium Perchlorate Reference Cell Perchloric acid	-	0.039	low
Hexane Reference Cell n-Hexane	4	501.187	high

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SECTION 12: Ecological information

Sodium Iodide Reference Cell Sodium iodide	0.05	1020	high
Sodium Nitrite Reference Cell Sodium nitrite	-3.7	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

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SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Hexane Blank	Not applicable.
Water Blank	Not applicable.
Holmium Perchlorate Reference Cell	Not applicable.
Hexane Reference Cell	Not applicable.
Potassium Chloride Reference Cell	Not applicable.
Sodium Iodide Reference Cell	Not applicable.
Potassium Dichromate Reference Cell - 60	Not applicable.
Potassium Dichromate Reference Cell - 600	Not applicable.
Perchloric Acid Blank	Not applicable.
Sodium Nitrite Reference Cell	Not applicable.
Potassium Dichromate Reference Cell - 40 mg/L	Not applicable.
Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
Hexane Blank P5c E2
Holmium Perchlorate Reference Cell P8
Hexane Reference Cell P5c E2
Sodium Nitrite Reference Cell E1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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SECTION 15: Regulatory information

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: At least one component is not listed in DSL but all such components are listed in NDSL.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Hexane Blank Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f (Fertility) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	Regulatory data Regulatory data Regulatory data Regulatory data Regulatory data Regulatory data Regulatory data
Holmium Perchlorate Reference Cell Ox. Liq. 2, H272 Skin Corr. 1, H314	Expert judgment On basis of test data

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SECTION 16: Other information

Hexane Reference Cell

Flam. Liq. 2, H225
 Skin Irrit. 2, H315
 Repr. 2, H361f (Fertility)
 STOT SE 3, H336
 STOT RE 2, H373
 Asp. Tox. 1, H304
 Aquatic Chronic 2, H411

On basis of test data
 Calculation method
 Calculation method
 Calculation method
 Calculation method
 Expert judgment
 Calculation method

Sodium Iodide Reference Cell

STOT RE 2, H373
 Aquatic Chronic 3, H412

Calculation method
 Calculation method

Sodium Nitrite Reference Cell

Acute Tox. 4, H302
 Aquatic Acute 1, H400

Calculation method
 Calculation method

[Full text of abbreviated H statements](#)

Hexane Blank

H225
 H304
 H315
 H336
 H361f
 H373

 H411

Highly flammable liquid and vapour.
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 May cause drowsiness or dizziness.
 Suspected of damaging fertility.
 May cause damage to organs through prolonged or repeated exposure.
 Toxic to aquatic life with long lasting effects.

Holmium Perchlorate Reference Cell

H271
 H272
 H314

May cause fire or explosion; strong oxidiser.
 May intensify fire; oxidiser.
 Causes severe skin burns and eye damage.

Hexane Reference Cell

H225
 H304
 H315
 H336
 H361f
 H373

 H411

Highly flammable liquid and vapour.
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 May cause drowsiness or dizziness.
 Suspected of damaging fertility.
 May cause damage to organs through prolonged or repeated exposure.
 Toxic to aquatic life with long lasting effects.

Sodium Iodide Reference Cell

H315
 H319
 H372 (oral)

 H373

 H400
 H410
 H412

Causes skin irritation.
 Causes serious eye irritation.
 Causes damage to organs through prolonged or repeated exposure if swallowed.
 May cause damage to organs through prolonged or repeated exposure.
 Very toxic to aquatic life.
 Very toxic to aquatic life with long lasting effects.
 Harmful to aquatic life with long lasting effects.

Sodium Nitrite Reference Cell

H272
 H301
 H302
 H400

May intensify fire; oxidiser.
 Toxic if swallowed.
 Harmful if swallowed.
 Very toxic to aquatic life.

[Full text of classifications \[CLP/GHS\]](#)

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SECTION 16: Other information

Hexane Blank

Aquatic Chronic 2, H411
 Asp. Tox. 1, H304
 Flam. Liq. 2, H225
 Repr. 2, H361f
 Skin Irrit. 2, H315
 STOT RE 2, H373

STOT SE 3, H336

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 ASPIRATION HAZARD - Category 1
 FLAMMABLE LIQUIDS - Category 2
 REPRODUCTIVE TOXICITY (Fertility) - Category 2
 SKIN CORROSION/IRRITATION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Holmium Perchlorate Reference Cell

Ox. Liq. 1, H271
 Ox. Liq. 2, H272
 Skin Corr. 1, H314
 Skin Corr. 1A, H314

OXIDISING LIQUIDS - Category 1
 OXIDISING LIQUIDS - Category 2
 SKIN CORROSION/IRRITATION - Category 1
 SKIN CORROSION/IRRITATION - Category 1A

Hexane Reference Cell

Aquatic Chronic 2, H411
 Asp. Tox. 1, H304
 Flam. Liq. 2, H225
 Repr. 2, H361f
 Skin Irrit. 2, H315
 STOT RE 2, H373

STOT SE 3, H336

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 ASPIRATION HAZARD - Category 1
 FLAMMABLE LIQUIDS - Category 2
 REPRODUCTIVE TOXICITY (Fertility) - Category 2
 SKIN CORROSION/IRRITATION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Sodium Iodide Reference Cell

Aquatic Acute 1, H400
 Aquatic Chronic 1, H410
 Aquatic Chronic 3, H412
 Eye Irrit. 2, H319
 Skin Irrit. 2, H315
 STOT RE 1, H372 (oral)

STOT RE 2, H373

SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
 SKIN CORROSION/IRRITATION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (oral) - Category 1
 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Sodium Nitrite Reference Cell

Acute Tox. 3, H301
 Acute Tox. 4, H302
 Aquatic Acute 1, H400
 Ox. Sol. 3, H272

ACUTE TOXICITY (oral) - Category 3
 ACUTE TOXICITY (oral) - Category 4
 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 OXIDISING SOLIDS - Category 3

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Version : 2

Notice to reader

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