

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. (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 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

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

Identified uses	
Analytical chemistry.	
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 : 17/03/2017

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 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 AQUATIC HAZARD - Category 2

Sodium Iodide Reference Cell

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

Sodium Nitrite Reference Cell

H302	ACUTE TOXICITY (oral) - Category 4
H400	ACUTE AQUATIC HAZARD - Category 1

SECTION 2: Hazards identification

Ingredients of unknown toxicity	: Holmium Perchlorate Reference Cell	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 4%
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



Signal word	: Hexane Blank	Danger
	Water Blank	No signal word.
	Holmium Perchlorate Reference Cell	Danger
	Hexane Reference Cell	Danger
	Potassium Chloride Reference Cell	No signal word.
	Sodium Iodide Reference Cell	Warning
	Potassium Dichromate Reference Cell - 60	No signal word.
	Potassium Dichromate Reference Cell - 600	No signal word.
	Perchloric Acid Blank	No signal word.
	Sodium Nitrite Reference Cell	Warning
	Potassium Dichromate Reference Cell - 40 mg/L	No signal word.
	Potassium Dichromate Reference Cell - 120 mg/L	No signal word.

Hazard statements

: Hexane Blank	GHS02 - Highly flammable liquid and vapour.
	GHS07 - Causes skin irritation. May cause drowsiness or dizziness.
	GHS08 - May be fatal if swallowed and enters airways. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure.
	GHS09 - Toxic to aquatic life with long lasting effects.
Water Blank	No known significant effects or critical hazards.
Holmium Perchlorate Reference Cell	GHS03 - May intensify fire; oxidiser.
	GHS05 - Causes severe skin burns and eye damage.
Hexane Reference Cell	GHS02 - Highly flammable liquid and vapour.
	GHS07 - Causes skin irritation. May cause drowsiness or dizziness.
	GHS08 - May be fatal if swallowed and enters airways. Suspected of damaging fertility.

SECTION 2: Hazards identification

Potassium Chloride Reference Cell	May cause damage to organs through prolonged or repeated exposure. GHS09 - Toxic to aquatic life with long lasting effects. No known significant effects or critical hazards.
Sodium Iodide Reference Cell	GHS08 - May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. 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	GHS07 - Harmful if swallowed. GHS09 - Very toxic to aquatic life. 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.

Precautionary statements

Prevention

: Hexane Blank	P201 - Obtain special instructions before use. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
Water Blank	Not applicable.
Holmium Perchlorate Reference Cell	P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat. - No smoking. P220 - Keep away from clothing, incompatible materials and combustible materials.
Hexane Reference Cell	P201 - Obtain special instructions before use. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
Potassium Chloride Reference Cell	Not applicable.
Sodium Iodide Reference Cell	P273 - Avoid release to the environment.
Potassium Dichromate Reference Cell - 60	P260 - Do not breathe vapour. Not applicable.
Potassium Dichromate Reference Cell - 600	Not applicable.
Perchloric Acid Blank	Not applicable.
Sodium Nitrite Reference Cell	P273 - Avoid release to the environment.

SECTION 2: Hazards identification

	Potassium Dichromate Reference Cell - 40 mg/L	P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
	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 or shower.
	Water Blank	Not applicable.
	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 or shower. Immediately call a POISON CENTER or physician.
	Hexane Reference Cell	P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician. 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 or shower.
	Potassium Chloride Reference Cell	Not applicable.
	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 Reference Cell	P391 - Collect spillage.
	Potassium Dichromate Reference Cell - 40 mg/L	P301 + P312 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
	Potassium Dichromate Reference Cell - 120 mg/L	Not applicable.
Storage	: Hexane Blank	P235 - Keep cool.
	Water Blank	Not applicable.
	Holmium Perchlorate Reference Cell	P405 - Store locked up.
	Hexane Reference Cell	P235 - Keep cool.
	Potassium Chloride Reference Cell	Not applicable.
	Sodium Iodide Reference Cell	Not applicable.
	Potassium Dichromate Reference Cell - 60	Not applicable.
	Potassium Dichromate	Not applicable.

SECTION 2: Hazards identification

	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	
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	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Reference Cell	
	Hexane Reference Cell	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Potassium Chloride	Not applicable.
	Reference Cell	
	Sodium Iodide	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Reference Cell	
	Potassium Dichromate	Not applicable.
	Reference Cell - 60	
	Potassium Dichromate	Not applicable.
	Reference Cell - 600	
	Perchloric Acid Blank	Not applicable.
	Sodium Nitrite	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Reference Cell	
	Potassium Dichromate	Not applicable.
	Reference Cell - 40 mg/L	
	Potassium Dichromate	Not applicable.
	Reference Cell - 120 mg/L	
Hazardous ingredients	: Holmium Perchlorate	- perchloric acid
	Reference Cell	
	Hexane Reference Cell	- n-hexane
	Sodium Iodide	- Sodium iodide
	Reference Cell	
	Sodium Nitrite	- sodium nitrite
	Reference Cell	
Supplemental label elements	: 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 2: Hazards identification

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

2.3 Other hazards

Other hazards which do not result in classification	Hexane Blank	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion.
	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.

SECTION 2: Hazards identification

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	EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]
Holmium Perchlorate Reference Cell Perchloric acid	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)	[1]

SECTION 3: Composition/information on ingredients

<p>Sodium Nitrite Reference Cell Sodium nitrite</p>	<p>EC: 231-555-9 CAS: 7632-00-0 Index: 007-010-00-4</p>	<p>≤10</p>	<p>Aquatic Chronic 1, H410 (M=1) Ox. Sol. 3, H272 Acute Tox. 3, H301 Aquatic Acute 1, H400 (M=10) See Section 16 for the full text of the H statements declared above.</p>	<p>[1]</p>
--	---	------------	---	------------

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
- [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.
	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	Immediately flush eyes with plenty of water, occasionally

SECTION 4: First aid measures

Inhalation	Reference Cell - 40 mg/L	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.
	: 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 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	

SECTION 4: First aid measures**Skin contact**

Sodium Nitrite Reference Cell	comfortable for breathing. Get medical attention if symptoms occur. 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.
: Hexane Blank	Wash skin thoroughly with soap and water or use recognised skin cleanser. 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 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	Flush contaminated skin with plenty of water. Remove

SECTION 4: First aid measures

	Reference Cell - 40 mg/L	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 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.
	Hexane 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. 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.
	Potassium Chloride Reference Cell	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.
	Sodium Iodide Reference Cell	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

SECTION 4: First aid measures

Potassium Dichromate Reference Cell - 60	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. 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 - 600	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.
Perchloric Acid 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.
Sodium Nitrite Reference Cell	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. 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

SECTION 4: First aid measures

Hexane Reference Cell	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. 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: 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	No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye damage. 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. No known significant effects or critical hazards.
Inhalation	: Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide	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.

SECTION 4: First aid measures

	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	
Skin contact	: Hexane Blank	Causes skin irritation. Defatting to the skin.
	Water Blank	No known significant effects or critical hazards.
	Holmium Perchlorate	Causes severe burns.
	Reference Cell	
	Hexane Reference Cell	Causes skin irritation.
	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	
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

SECTION 4: First aid measures

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 - 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.	
	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.	

SECTION 4: First aid measures

	Potassium Dichromate Reference Cell - 120 mg/L	No specific data.
Skin contact	: Hexane Blank	Adverse symptoms may include the following: irritation redness dryness cracking reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank Holmium Perchlorate Reference Cell	No specific data. 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.
Ingestion	: Hexane Blank	Adverse symptoms may include the following: nausea or vomiting reduced foetal weight increase in foetal deaths skeletal malformations
	Water Blank Holmium Perchlorate Reference Cell	No specific data. 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 Reference Cell	No specific data.

SECTION 4: First aid measures

Potassium Dichromate Reference Cell - 40 mg/L	No specific data.
Potassium Dichromate Reference Cell - 120 mg/L	No specific data.

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 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 Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Sodium Iodide Reference Cell	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Potassium Dichromate Reference Cell - 60	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Potassium Dichromate 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.
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.
		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. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly-grounded containers. Static accumulation may be significantly increased by the presence of small quantities of water or other contaminants. 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. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be
--	---	--------------	---

SECTION 5: Firefighting measures

Water Blank	contained and prevented from being discharged to any waterway, sewer or drain. 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. 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. Runoff to sewer may create fire or explosion hazard. 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 Reference Cell - 40 mg/L	In a fire or if heated, a pressure increase will occur and the container may burst.
Potassium Dichromate Reference Cell - 120 mg/L	In a fire or if heated, a pressure increase will occur and the container may burst.
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	Decomposition products may include the following materials:

SECTION 5: Firefighting measures

Reference Cell	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 taken involving any personal risk or without suitable training.
Potassium Dichromate Reference Cell - 60	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.
: 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

Special protective equipment for fire-fighters

SECTION 5: Firefighting measures

Holmium Perchlorate Reference Cell	basic level of protection for chemical incidents. 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 Reference Cell - 600	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.
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 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

SECTION 6: Accidental release measures

For emergency responders

Potassium Dichromate Reference Cell - 40 mg/L	vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. 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.
: 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-emergency personnel".
Potassium Chloride 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".
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".

SECTION 6: Accidental release measures

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 (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

SECTION 6: Accidental release measures

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 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 - 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.

SECTION 6: Accidental release measures

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. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Restrict flow velocity according to API 2003 (2008), NFPA 77 (2007), and Laurence Britton, "Avoiding Static Ignition Hazards in Chemical Operations". To reduce potential for static discharge, ensure that all equipment is properly grounded and bonded and meets appropriate electrical classification requirements.
	Water Blank	Put on appropriate personal protective equipment (see Section 8).
	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

SECTION 7: Handling and storage

	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).
: 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	Eating, drinking and smoking should be prohibited in areas

Advice on general occupational hygiene

SECTION 7: Handling and storage

Reference Cell	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. 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 - 120 mg/L	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.
	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.

SECTION 7: Handling and storage

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. 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.
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.
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 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.
Sodium Iodide 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. 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.
Potassium Dichromate Reference Cell - 60	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.
Potassium Dichromate Reference Cell - 600	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.
Perchloric Acid 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

SECTION 7: Handling and storage

Sodium Nitrite Reference Cell	prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. 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.
Potassium Dichromate Reference Cell - 40 mg/L	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.
Potassium Dichromate Reference Cell - 120 mg/L	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.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Hexane Blank P5c: Flammable liquids 2 and 3 not falling under P5a or P5b E2: Hazardous to the aquatic environment - Chronic 2	5000 200	50000 500
Holmium Perchlorate Reference Cell P8: Oxidizing liquids and solids	50	200
Hexane Reference Cell P5c: Flammable liquids 2 and 3 not falling under P5a or P5b E2: Hazardous to the aquatic environment - Chronic 2	5000 200	50000 500
Sodium Nitrite Reference Cell E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1	100	200

7.3 Specific end use(s)

Recommendations	: Hexane Blank Water Blank Holmium Perchlorate Reference Cell Hexane Reference Cell Potassium Chloride Reference Cell Sodium Iodide Reference Cell Potassium Dichromate Reference Cell - 60	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
------------------------	---	---

SECTION 7: Handling and storage

	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.
Industrial sector specific solutions	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.

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.

SECTION 8: Exposure controls/personal protection**PNECs**

No PNECs available

8.2 Exposure controls

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	Liquid.

SECTION 9: Physical and chemical properties

	Reference Cell - 60	
	Potassium Dichromate	Liquid.
	Reference Cell - 600	
	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	

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

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.	

SECTION 9: Physical and chemical properties

	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.
	Potassium Dichromate Reference Cell - 600	Not available.
	Perchloric Acid Blank	Not available.

SECTION 9: Physical and chemical properties

	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.
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.

SECTION 9: Physical and chemical properties

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.
 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.

SECTION 9: Physical and chemical properties

Decomposition temperature	:	Hexane Blank	Not available.	
		Water Blank	>1200°C	
		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.	
	Viscosity	:	Hexane Blank	Dynamic (room temperature): 0.3 mPa·s
			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.	
Explosive 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	Not available.	

SECTION 9: Physical and chemical properties

	Reference Cell - 120 mg/L	
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.
	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.

SECTION 10: Stability and reactivity

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.

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	No specific data.

SECTION 10: Stability and reactivity

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

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 Attacks many metals producing extremely flammable
 Reference Cell 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 May react or be incompatible with oxidising materials.
 Reference Cell
 Sodium Iodide May react or be incompatible with oxidising materials.
 Reference Cell
 Potassium Dichromate May react or be incompatible with oxidising materials.
 Reference Cell - 60
 Potassium Dichromate May react or be incompatible with oxidising materials.
 Reference Cell - 600
 Perchloric Acid Blank May react or be incompatible with oxidising materials.
 Sodium Nitrite May react or be incompatible with oxidising materials.
 Reference Cell
 Potassium Dichromate May react or be incompatible with oxidising materials.
 Reference Cell - 40 mg/L
 Potassium Dichromate May react or be incompatible with oxidising materials.
 Reference Cell - 120 mg/L

10.6 Hazardous decomposition products

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

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 LD50 Oral	Rat Rat	48000 ppm 15840 mg/kg	4 hours -
Holmium Perchlorate Reference Cell Perchloric acid	LD50 Oral	Rat	1100 mg/kg	-
Hexane Reference Cell n-Hexane	LC50 Inhalation Vapour LD50 Oral	Rat Rat	48000 ppm 15840 mg/kg	4 hours -
Sodium Iodide Reference Cell Sodium iodide	LD50 Oral	Rat	4340 mg/kg	-
Sodium Nitrite Reference Cell Sodium nitrite	LC50 Inhalation Dusts and mists LD50 Oral	Rat Rat	5.5 mg/l 85 mg/kg	4 hours -

Acute toxicity estimates

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

Irritation/Corrosion

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.

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

SECTION 11: Toxicological information

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

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	Routes of entry anticipated: Oral, Dermal, Inhalation.
Water Blank	Not available.
Holmium Perchlorate Reference Cell	Routes of entry anticipated: Oral, Dermal, Inhalation.
Hexane Reference Cell	Routes of entry anticipated: Oral, Dermal, Inhalation.
Potassium Chloride Reference Cell	Not available.
Sodium Iodide Reference Cell	Routes of entry anticipated: Oral, Dermal, Inhalation.
Potassium Dichromate Reference Cell - 60	Not available.
Potassium Dichromate Reference Cell - 600	Not available.
Perchloric Acid Blank	Not available.
Sodium Nitrite Reference Cell	Routes of entry anticipated: Oral, Dermal, Inhalation.
Potassium Dichromate Reference Cell - 40 mg/L	Not available.
Potassium Dichromate Reference Cell - 120 mg/L	Not available.

Potential acute health effects

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	No known significant effects or critical hazards.

SECTION 11: Toxicological information

	Reference Cell - 40 mg/L Potassium Dichromate Reference Cell - 120 mg/L	No known significant effects or critical hazards.
Ingestion	: 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 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. 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. Harmful if swallowed. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: 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	Causes skin irritation. Defatting to the skin. No known significant effects or critical hazards. Causes severe burns. Causes skin irritation. 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.
Eye contact	: 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	No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye damage. 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. No known significant effects or critical hazards.

SECTION 11: Toxicological information

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

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.

SECTION 11: Toxicological information

	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.
Skin contact	: Hexane Blank	Adverse symptoms may include the following: irritation redness dryness cracking 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	No specific data.

SECTION 11: Toxicological information

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	

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. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
	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.

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	
Mutagenicity	:	
	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.
	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	
Teratogenicity	:	
	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.
	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	
Developmental effects	:	
	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.

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	

SECTION 12: Ecological information**12.1 Toxicity**

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
Hexane Blank n-Hexane	Acute LC50 113000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
Hexane Reference Cell n-Hexane	Acute LC50 113000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
Sodium Iodide Reference Cell Sodium iodide	Acute LC50 780 µg/l Fresh water Acute LC50 860000 µg/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 48 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

Product/ingredient name	Test	Result	Dose	Inoculum
Water Blank Water	-	100 % - 28 days	-	-

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
Sodium Iodide Reference Cell Sodium iodide	0.05	1020	high

SECTION 12: Ecological information

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**Regulatory 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.

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	Not applicable.
	Reference Cell	
	Hexane Reference Cell	Not applicable.
	Potassium Chloride	Not applicable.
	Reference Cell	
	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

Europe inventory : All components are listed or exempted.

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: Flammable liquids 2 and 3 not falling under P5a or P5b

E2: Hazardous to the aquatic environment - Chronic 2

Holmium Perchlorate Reference Cell

P8: Oxidizing liquids and solids

Hexane Reference Cell

P5c: Flammable liquids 2 and 3 not falling under P5a or P5b

E2: Hazardous to the aquatic environment - Chronic 2

Sodium Nitrite Reference Cell

E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

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.

[International lists](#)

[National inventory](#)

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.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
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.
Turkey	: Not determined.
United States	: All components are listed or exempted.

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

[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
Hexane Reference Cell Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f (Fertility)	On basis of test data Calculation method Calculation method

Date of issue/Date of revision : 17/03/2017

SECTION 16: Other information

STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Sodium Iodide Reference Cell STOT RE 2, H373 Aquatic Chronic 3, H412 Sodium Nitrite Reference Cell Acute Tox. 4, H302 Aquatic Acute 1, H400	Calculation method Calculation method Expert judgment Calculation method Calculation method Calculation method Calculation method Calculation method
--	---

[Full text of abbreviated H statements](#)

Hexane Blank H225 H304 H315 H336 H361f H373 H411 Holmium Perchlorate Reference Cell H271 H272 H314 Hexane Reference Cell H225 H304 H315 H336 H361f H373 H411 Sodium Iodide Reference Cell H315 H319 H372 (oral) H373 H400 H410 H412 Sodium Nitrite Reference Cell H272 H301 H302 H400	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. May cause fire or explosion; strong oxidiser. May intensify fire; oxidiser. Causes severe skin burns and eye damage. 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. 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. May intensify fire; oxidiser. Toxic if swallowed. Harmful if swallowed. Very toxic to aquatic life.
--	---

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

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 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 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

ACUTE AQUATIC HAZARD - Category 1
 LONG-TERM AQUATIC HAZARD - Category 1
 LONG-TERM 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
 ACUTE AQUATIC HAZARD - Category 1
 OXIDISING SOLIDS - Category 3

Date of issue/ Date of revision : 17/03/2017

Date of previous issue : No previous validation.

Version : 1

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.