

## Safety Data Sheet

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

**Identification of the substance or mixture**

**Product code** 074532  
**Product name** EGC III KOH (EluGen® III Potassium Hydroxide Cartridge)

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

**Relevant identified uses**  
For Laboratory Use.

**Uses advised against**  
No information available.

**Company/undertaking identification**

Thermo Fisher Scientific  
1228 Titan Way  
P.O. Box 3603  
Sunnyvale, CA 94088-3603

Supplier/Supply chain  
Company name: Thermo Fisher Scientific Korea  
Address: 10 FL, Suseo Office Building 281,  
Gwangpyeong-ro, Gangnam-gu, Seoul, 06349 Korea  
TEL(FAX): 02-3420-8600 (02-3420-8688)  
Emergency Phone: 02-3420-8657/02-3420-8686

**24 hour Emergency Response for Hazardous Materials** Within the USA + Canada: 1-800-424-9300 and  
**[or Dangerous Goods] Incident. Spill, Leak, Fire,** 1-703-527-3887  
**Exposure, or Accident. Call CHEMTREC** Outside the USA + Canada: 1-703-741-5970

**Country Specific Emergency Number (if available):**

CHEMTREC Israel (Tel Aviv)	+ (972)-37630639 (Greeting Language: Hebrew)
CHEMTREC Malaysia	1-800-815-308 (Toll Free) (Greeting Language: Malay)
CHEMTREC Malaysia (Kuala Lumpur)	+ (60)-327884561 (Greeting Language: Malay)
CHEMTREC Philippines	1-800-1-116-1020 (Toll Free) (Greeting Language: Tagalog)
CHEMTREC Philippines (Manila)	+ (63) 632-395-3308 (Greeting Language: Tagalog)
CHEMTREC Saudi Arabia	+ (966)-8111095861 (Greeting Language: Arabic and English)
CHEMTREC Singapore	800-101-2201 (Toll Free) (Greeting Language: English and Mandarin)
CHEMTREC Singapore	+ (65)-31581349 (Greeting Language: English and Mandarin)
CHEMTREC Australia (Sydney)	+ (61)-290372994 (Greeting Language: English)
CHEMTREC New Zealand (Auckland)	+ (64)-98010034 (Greeting Language: English)
CHEMTREC South Africa	0-800-983-611 (Greeting Language: English)
CHEMTREC Vietnam (Hanoi)	+ (84)-444581771 (welcome Language: Vietnamese)

## SECTION 2: Hazards identification

### Australian SDS Statement

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS) Hazardous Substance. Dangerous Goods.

### GHS Classification

#### Health hazards

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 1 A
Serious eye damage/eye irritation	Category 1

#### Physical hazards

GHS Physical Hazard	Substances/mixtures corrosive to metal
GHS Physical Hazard Category Number	Category 1

#### Environmental hazards

Not Hazardous

### Label elements

#### Signal Word

DANGER

#### Hazard pictograms



#### Hazard Statements

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H302 - Harmful if swallowed

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## Precautionary Statements

### Prevention

- P234 - Keep only in original container
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

### Response

- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P390 - Absorb spillage to prevent material damage
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

### Storage

- P406 - Store in corrosion resistant container with a resistant inner liner

### Disposal

- P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards

Not Applicable

## SECTION 3: Composition/information on ingredients

Component	CAS No	Common name	EINECS-No.	Weight-%
Water 7732-18-5 ( 77.6 )	7732-18-5	-	231-791-2	77.6
Potassium hydroxide 1310-58-3 ( 22.4 )	1310-58-3	-	-	22.4

We recommend handling all chemicals with caution.

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## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Remove/Take off immediately all contaminated clothing. Rinse skin with water. In case of skin reactions, consult a doctor.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion</b>	Do not induce vomiting without medical advice.
<b>Inhalation</b>	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a doctor.
<b>Notes to Physician</b>	Treat symptomatically.

### Most important symptoms and effects, both acute and delayed

H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage H302 - Harmful if swallowed

### Indication of any immediate medical attention and special treatment needed

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention.

## SECTION 5: Firefighting measures

### Extinguishing media

**Suitable extinguishing media**  
**Unsuitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.  
No information available.

### Special hazards arising from the substance or mixture

None known

### Protective equipment and precautions for firefighters

Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Always wear recommended Personal Protective Equipment  
Use personal protection equipment  
See section 8 for more information

### Environmental precautions

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Use personal protective equipment as required. Avoid breathing vapours or mists.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers.

### Specific end use(s)

Laboratory use.

## SECTION 8: Exposure controls/personal protection

### Control parameters

Chemical Name	Australia STEL	Australia	Australia - Skin Absorbers	Australia - OES - Peak
Water 7732-18-5	None	None	None	None
Potassium hydroxide 1310-58-3	None	None	None	2 mg/m <sup>3</sup>

Chemical Name	New Zealand - Workplace Exposure Limits	New Zealand TWA	New Zealand STEL	New Zealand Ceiling Limits
Water 7732-18-5	None	None	None	None
Potassium hydroxide 1310-58-3	None	None	None	2 mg/m <sup>3</sup>

Chemical Name	China OEL (MAC)	China - Skin Absorbers	Hong Kong OEL
Water 7732-18-5	None	None	None
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	None	Ceiling: 2 mg/m <sup>3</sup>

Chemical Name	Korea OEL (CEILING)	Korea OEL (TWA)	Korea OEL (STEL)
Water 7732-18-5	None	None	None
Potassium hydroxide 1310-58-3	2 mg/m <sup>3</sup>	None	None

Chemical Name	Korea OEL (Skin Notations)	Korea PEL (STELs)	Korea PEL (TWAs)
Water 7732-18-5	None	None	None
Potassium hydroxide 1310-58-3	None	None	None

Chemical Name	Korea OEL (Carcinogens)	Korea OEL (Germ Cell Mutagenicity)	Korea OEL (Reproductive Toxicity)
Water 7732-18-5	None	None	None
Potassium hydroxide 1310-58-3	None	None	None

Chemical Name	Taiwan OEL - TWA	Taiwan OEL (Skin notations, Carcinogens)	Taiwan OEL (STELs)	Taiwan OEL (Ceilings)
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Water 7732-18-5	None	None	None	None
Potassium hydroxide 1310-58-3	None	None	None	None

Chemical Name	Singapore OEL (PEL)	Singapore OEL (STEL)
Water 7732-18-5	None	None
Potassium hydroxide 1310-58-3	None	2 mg/m <sup>3</sup>

Chemical Name	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Water 7732-18-5	None	None
Potassium hydroxide 1310-58-3	None	None

**Engineering Measures**      Ensure adequate ventilation, especially in confined areas

**Exposure controls**

**Personal Protective Equipment**

**Respiratory protection**      In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

**Hand protection**              Wear suitable gloves Glove material: Nitrile rubber. Information is based on professional knowledge

**Eye protection**                Wear safety glasses with side shields (or goggles)

**Skin and Body Protection**    Wear suitable protective clothing. Wear laboratory coat for body protection

**Hygiene Measures**            Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls**

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colourless	
<b>Odour</b>	odourless	
<b>Odour Threshold</b>	No data	
<b>Molecular Weight</b>	56.1	
<b>pH</b>	12	
<b>Melting point / melting range</b>	°C No data	°F No data
<b>Boiling point / boiling range</b>	°C 133-145	°F 271.4-295
<b>Flash point</b>	°C No data	°F No data
<b>Autoignition Temperature</b>	°C No data	°F No data
<b>Decomposition temperature</b>	°C No data	°F No data
<b>Evaporation rate</b>	No data	
<b>Flammability (solid, gas)</b>	Not Applicable	
<b>Upper explosion limit</b>	No data	
<b>Lower explosion limit</b>	No data	
<b>Vapour Pressure</b>	No data	
<b>Vapour density</b>	No data	
<b>Relative density</b>	No data	
<b>Specific gravity</b>	No data	
<b>Solubility</b>	No data	
<b>Partition coefficient: n-octanol/water</b>	No data	
<b>Viscosity</b>	No data	
<b>Explosive properties</b>	No data	
<b>Oxidising properties</b>	No data	

### Other information

No data.

## SECTION 10: Stability and reactivity

<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has not been reported.
<b>Conditions to avoid</b>	No information available.
<b>Incompatible materials</b>	Water reactive chemical. Strong acids. Strong oxidising agents. Metals.
<b>Hazardous decomposition products</b>	No data available.

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## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	No data available	No data available
Potassium hydroxide	= 284 mg/kg (Rat)	No data available	No data available

### Principal Routes of Exposure

<b>Acute toxicity</b>	Harmful if swallowed.
<b>Skin corrosion/irritation</b>	Causes skin burns. Serious eye damage/eye irritation
<b>Serious eye damage/irritation</b>	Data are conclusive but insufficient for classification
<b>Respiratory or skin sensitisation</b>	Data are conclusive but insufficient for classification
<b>Specific target organ toxicity (STOT) – single exposure</b>	Data are conclusive but insufficient for classification
<b>Specific target organ toxicity (STOT) – repeated exposure</b>	Data are conclusive but insufficient for classification
<b>Carcinogenicity</b>	Data are conclusive but insufficient for classification
<b>Germ cell mutagenicity</b>	Data are conclusive but insufficient for classification
<b>Reproductive toxicity</b>	Data are conclusive but insufficient for classification
<b>Aspiration hazard</b>	Data are conclusive but insufficient for classification

## SECTION 12: Ecological information

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Water	No data available	No data available	No data available	No data available	No data available
Potassium hydroxide	No data available	No data available	No data available	No data available	logPow0.65 logPow0.83

**Mobility in soil** No information available.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

No information available.

**Other adverse effects** No information available.

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## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Classified as dangerous in the meaning of transport regulations

<b>UN number</b>	1814
<b>UN proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II

### Environmental hazards

Not Hazardous

### Special precautions for user

Not Applicable

### Transport in bulk according to Annex II of MARPOL and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

### International Inventories

Chemical Name	US TSCA	Canada (DSL)	NDSL	PICCS (Philippines)
Water	Listed	Listed	-	Listed
Potassium hydroxide	Listed	Listed	-	Listed

Chemical Name	ENCS (Japan)	IECSC - China Inventory of Existing Chemical Substances	South Korea (KECL)	AICS (Australia)
Water	Listed	Listed	Listed	Listed
Potassium hydroxide	Listed	Listed	Listed	Listed

Chemical Name	NZIoC - New Zealand Inventory of Chemicals	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)
Water	Listed	Listed	-
Potassium hydroxide	Listed	Listed	-

### Korea

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## Occupational Safety and Health Act

Chemical Name	ISHA - Substances to be controlled - Metals	ISHA - Substances to be controlled - Organic Substances	ISHA - Substances to be controlled - Acids and bases	ISHA - Substances to be controlled - Gas-phase substances
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable	1 % cut-off value allowed in mixture	Not Applicable

Chemical Name	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Special management materials
Water	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Harmful agents subject to work environment monitoring - Organic compounds	Harmful agents subject to work environment monitoring - Metals	Harmful agents subject to work environment monitoring - Acids and alkalis	Harmful agents subject to work environment monitoring - Gas-phase substances	Harmful agents subject to work environment monitoring - Dusts
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable	1 % maximum cut-off value allowed in mixture	Not Applicable	Not Applicable

Chemical Name	Harmful agents subject to workers requiring health examination - Organic compounds	Harmful agents subject to workers requiring health examination - Metals	Harmful agents subject to workers requiring health examination - Acids and alkalis	Harmful agents subject to workers requiring health examination - Gas-phase substances	Harmful agents subject to workers requiring health examination - Dusts
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Korea OEL (CEILING)	Korea OEL (TWA)	Korea OEL (STEL)	Korea OEL (Skin Notations)
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Korea OEL (Carcinogens)	Korea OEL (Germ Cell Mutagenicity)	Korea OEL (Reproductive Toxicity)	Korea PEL (STELs)	Korea PEL (TWAs)
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Storage	ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Manufacturing or Handling
Water	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	Not Applicable

## Chemicals Control Act

Chemical Name	Toxic substance	Prohibited substance	Restricted substance
Water	Not Applicable	Not Applicable	Not Applicable
Potassium hydroxide	97-1-137 5% mixture cut-off	Not Applicable	Not Applicable

Chemical Name	Threshold Values (%)	Quantity limit for manufacture/use	Quantity limit for custody/storage
Water	Not Applicable	Not Applicable	Not Applicable

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Potassium hydroxide	Not Applicable	Not Applicable	Not Applicable
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Chemical Name	Pollutant Release and Transfer Registers (PRTR) - Group I	Pollutant Release and Transfer Registers (PRTR) - Group II
Water	Not Applicable	Not Applicable
Potassium hydroxide	Not Applicable	>=1.0 % w/w cut-off value [226]

### Act on Registration, Evaluation, etc. of Chemicals (K-REACH)

Chemical Name	Ministry of Environment - CMR risk	Ministry of Environment - Critically Controlled Substance	Existing substances subject to registration	Existing substances not likely to be subject to registration	Existing substances known to be of very low risk
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Index No. 25
Potassium hydroxide	Not Applicable	Not Applicable	Present (registration completed, [238])	Not Applicable	Not Applicable

### Safety Control of Dangerous Substances Act

Chemical Name	Safety Control of Dangerous Substances Act
Water	Not Applicable
Potassium hydroxide	Not Applicable

### Wastes Control Act

Chemical Name	Wastes Control Act
Water	Not Applicable
Potassium hydroxide	Not Applicable

### Singapore

Chemical Name	Singapore - Poisons List
Water	Not Listed
Potassium hydroxide	Not Listed

### Taiwan

Chemical Name	Toxic Chemical Substances Control Act - Classification and Control Levels	Toxic Chemical Substances Control Act - Threshold Regulated Quantities	Hazard Prevention Standard for Specified Chemical Substances
Water	Not Listed	Not Listed	Not Listed
Potassium hydroxide	Not Listed	Not Listed	Not Listed

### China

Chemical Name	China - Catalogue of Occupational Hazard Factors	China - Dangerous Goods List	China - Catalog of Hypertoxic Chemicals	China - List of Dangerous Chemicals for Priority Management
Water	Not Listed	Not Listed	Not Listed	Not Listed
Potassium hydroxide	Not Listed	Present (solid or solution)	Not Listed	Not Listed

## SECTION 16: Other information

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**Reason for revision** SDS sections updated.  
**Revision number** 5  
**Revision date** 26-Dec-2019

For Laboratory Use.

**References**

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

**End of Safety Data Sheet**