

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Potassium perchlorate
EC index no	: 017-008-00-5
EC no	: 231-912-9
CAS No	: 7778-74-7
Product code	: 05408
Formula	: KClO <sub>4</sub>
Synonyms	: Potassium Chlorate(VIII) / Perchloric Acid Potassium Salt / Peroidin

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

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401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Oxidising Solids, Category 1	H271
Acute toxicity (oral), Category 4	H302

Full text of classification categories and H statements : see section 16

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### Classification according to Directive 67/548/EEC or 1999/45/EC

O; R9

Xn; R22

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS03

GHS07

Signal word (CLP) :

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Hazard statements (CLP) :

H271 - May cause fire or explosion; strong oxidiser  
H302 - Harmful if swallowed

Precautionary statements (CLP) :

P220 - Keep/Store away from clothing/.../combustible materials

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : POTASSIUM PERCHLORATE AR/ACS  
CAS No : 7778-74-7  
EC no : 231-912-9  
EC index no : 017-008-00-5

Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Take off contaminated clothing. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

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First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

Symptoms/injuries after ingestion : Harmful if swallowed.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidiser.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Do not allow to enter drains or water courses. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Take any precaution to avoid mixing with combustibles/...

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Keep in fireproof place.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. combustible materials.

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### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear appropriate mask
Other information	: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White crystalline.
Odour	: odourless.
Odour threshold	: No data available
pH	: 5.0 - 6.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 400 °C
Freezing point	: No data available
Boiling point	: 4000 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 4.8
Relative density	: No data available
Density	: 2.52 g/cm <sup>3</sup>
Solubility	: Water: 13.9 g/l at 20 °C
Log Pow	: No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May cause fire or explosion; strong oxidiser.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

May cause fire or explosion; strong oxidiser.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Do not allow contact with water. Moisture. Direct sunlight.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
Skin corrosion/irritation	: Not classified pH: 5.0 - 6.5
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified pH: 5.0 - 6.5
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified

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Additional information : Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

##### Potassium perchlorate (7778-74-7)

Persistence and degradability	Not established.
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#### 12.3. Bioaccumulative potential

##### Potassium perchlorate (7778-74-7)

Bioaccumulative potential	Not established.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Additional information : Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...

Additional information : Hazardous waste due to potential risk of explosion.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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### 14.1. UN number

UN-No. (ADR)	: 1489
UN-No. (IMDG)	: 1489
UN-No.(IATA)	: 1489
UN-No.(ADN)	: 1489
UN-No. (RID)	: 1489

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: POTASSIUM PERCHLORATE
Proper Shipping Name (IMDG)	: POTASSIUM PERCHLORATE
Proper Shipping Name (IATA)	: POTASSIUM PERCHLORATE
Proper Shipping Name (ADN)	: POTASSIUM PERCHLORATE
Proper Shipping Name (RID)	: POTASSIUM PERCHLORATE
Transport document description (ADR)	: UN 1489 POTASSIUM PERCHLORATE, 5.1, II, (E)
Transport document description (IMDG)	: UN 1489 POTASSIUM PERCHLORATE, 5.1, II
Transport document description (IATA)	: UN 1489 POTASSIUM PERCHLORATE, 5.1, II
Transport document description (ADN)	: UN 1489 POTASSIUM PERCHLORATE, 5.1, II
Transport document description (RID)	: UN 1489 POTASSIUM PERCHLORATE, 5.1, II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 5.1
Danger labels (ADR)	: 5.1



#### IMDG

Transport hazard class(es) (IMDG)	: 5.1
Danger labels (IMDG)	: 5.1



#### IATA

Transport hazard class(es) (IATA)	: 5.1
Hazard labels (IATA)	: 5.1



#### ADN

Transport hazard class(es) (ADN)	: 5.1
Danger labels (ADN)	: 5.1

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### RID

Transport hazard class(es) (RID) : 5.1

Danger labels (RID) : 5.1



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : O2

Limited quantities (ADR) : 1kg

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P002, IBC06

Mixed packing provisions (ADR) : MP2

Portable tank and bulk container instructions (ADR) : T3

Portable tank and bulk container special provisions (ADR) : TP33

Tank code (ADR) : SGAV

Tank special provisions (ADR) : TU3

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Packages (ADR) : V11

Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP6, AP7

Special provisions for carriage - Loading, unloading and handling (ADR) : CV24

Special provisions for carriage - Operation (ADR) : S23

Hazard identification number (Kemler No.) : 50

Orange plates :





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Tunnel restriction code (ADR) : E  
EAC code : 1Y

### - Transport by sea

Limited quantities (IMDG) : 1 kg  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P002  
IBC packing instructions (IMDG) : IBC06  
IBC special provisions (IMDG) : B2  
Tank instructions (IMDG) : T3  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-H  
EmS-No. (Spillage) : S-Q  
Stowage category (IMDG) : A  
Segregation (IMDG) : SG38, SG49  
MFAG-No : 140

### - Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y544  
PCA limited quantity max net quantity (IATA) : 2.5kg  
PCA packing instructions (IATA) : 558  
PCA max net quantity (IATA) : 5kg  
CAO packing instructions (IATA) : 562  
CAO max net quantity (IATA) : 25kg  
ERG code (IATA) : 5L

### - Inland waterway transport

Classification code (ADN) : O2  
Limited quantities (ADN) : 1 kg  
Excepted quantities (ADN) : E2  
Equipment required (ADN) : PP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : O2  
Limited quantities (RID) : 1kg  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P002, IBC06  
Mixed packing provisions (RID) : MP2  
Portable tank and bulk container instructions (RID) : T3  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAV  
Special provisions for RID tanks (RID) : TU3  
Transport category (RID) : 2  
Special provisions for carriage – Packages (RID) : W11  
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP6, AP7  
Special provisions for carriage – Loading and unloading (RID) : CW24  
Colis express (express parcels) (RID) : CE10  
Hazard identification number (RID) : 50

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### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Potassium perchlorate is not on the REACH Candidate List

Potassium perchlorate is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 169)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Ox. Sol. 1	Oxidising Solids, Category 1
H271	May cause fire or explosion; strong oxidiser
H302	Harmful if swallowed
R22	Harmful if swallowed
R9	Explosive when mixed with combustible material
O	Oxidising
Xn	Harmful

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## Safety Data Sheet

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*