

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 SDS Reference Number: 05408

Issue date: 4/9/2014 Revision date: 10/18/2024 Supersedes version of: 12/12/2017 Version: 1.0

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

1.1. Product identifier

Product form Substance

Trade name POTASSIUM PERCHLORATE AR/ACS

EC Index-No. 017-008-00-5 EC-No. 231-912-9 CAS-No. 7778-74-7 Product code 05408

Type of product : Inorganic compound

KCIO4 Formula

Chemical structure

O=CI-O- K+

Synonyms : Potassium chlorate(VIII), Perchloric acid Potassium Salt, Peroidin

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

Relevant identified uses

Industrial/Professional use spec : Industrial

For professional use only

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.

107 Wode House Road, Jehangir Villa, Colaba

400005 Mumbai

INDIA

T+91 22 6663 6663, F+91 22 6663 6699 info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

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 Acute toxicity (oral), Category 4 H302

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause fire or explosion; strong oxidiser. Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms (CLP)



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Signal word (CLP) : Danger

Hazard statements (CLP) : H271 - May cause fire or explosion; strong oxidiser.

H302 - Harmful if swallowed.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P220 - Keep away from clothing and other combustible materials.

P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
POTASSIUM PERCHLORATE	CAS-No.: 7778-74-7 EC-No.: 231-912-9 EC Index-No.: 017-008-00-5	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

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. If skin irritation occurs: Get medical advice/attention. Rinse

skin with water/shower. Rinse immediately contaminated clothing and skin with plenty of

water before removing clothes.

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.

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

poison center or a doctor if you feel unwell.

First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation

exposure. Although no appropriate human or animal health effects data are known to exist,

this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in

combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects 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.

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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.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk

of explosion. Do not enter fire area without proper protective equipment, including

respiratory protection.

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

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and

no smoking.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective

equipment as required. For further information refer to section 8: "Exposure

controls/personal protection".

Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

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

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.

Methods for cleaning up : Mechanically recover the product. On land, sweep or shovel into suitable containers.

Minimise generation of dust. Store away from other materials. Notify authorities if product

enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

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 : Ensure good ventilation of the work station. 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... Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

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

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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. Packaging materials : Store always product in container of same material as original container.

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

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):









Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Skin protection

Skin and body protection:

Wear a mask. Wear fire/flame resistant/retardant clothing.

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

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.

Appearance : Crystalline powder. Powder.

Molecular mass : 138.55 g/mol Odour : Odourless. Odour threshold : Not available

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Melting point : 400 °C

Freezing point : Not applicable

Boiling point : 4000 °C

Flammability : Non flammable.

Oxidising properties : May cause fire or explosion; strong oxidiser.

Lower explosion limit : Not applicable Upper explosion limit : Not applicable Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : 400 °C pH : 5 - 7 pH solution concentration : 1 %

Viscosity, kinematic : Not applicable

Solubility : Water: 1.5 g/100ml at 25 °C

Ether: Insoluble

Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure : Not available Vapour pressure at 50°C : Not available Density : 2.52 g/cm³ Relative density : Not available

Relative vapour density at 20°C : 4.8

Particle size : Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May cause fire or explosion; strong oxidiser.

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. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. Combustible materials.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified

pH: 5 – 7

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

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Serious eye damage/irritation : Not classified

pH: 5 - 7

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

Additional information : 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

STOT-single exposure : Not classified

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

STOT-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

POTASSIUM PERCHLORATE AR/ACS (7778-74-7)

Viscosity, kinematic Not applicable

11.2. Information on other hazards

Other information

Potential adverse human health effects and

symptoms

: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

 $\label{thm:local_equation} \mbox{Hazardous to the aquatic environment, short-term}$

(acute)

: Not classified

Hazardous to the aquatic environment, long-term

(chronic)

: Not classified

12.2. Persistence and degradability

POTASSIUM PERCHLORATE AR/ACS (7778-74-7)

Persistence and degradability Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

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

contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official

regulations

Additional information : Hazardous waste due to potential risk of explosion. Do not re-use empty containers.

Ecological information : Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number or ID number

 UN-No. (ADR)
 : UN 1489

 UN-No. (IMDG)
 : UN 1489

 UN-No. (IATA)
 : UN 1489

 UN-No. (ADN)
 : UN 1489

 UN-No. (RID)
 : UN 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

: 5.1 :



IMDG

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

:



IATA

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

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ADN

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



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
EmS-No. (Fire) : F-H
EmS-No. (Spillage) : S-Q

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 : TP33

(ADR)

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 : CV24

and handling (ADR)

Special provisions for carriage - Operation (ADR) : S23 Hazard identification number (Kemler No.) : 50

Orange plates :

50 50 1489

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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) Т3 Tank special provisions (IMDG) TP33 Stowage category (IMDG) Α

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 : TP33

(RID)

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, unloading : CW24

and handling (RID)

Colis express (express parcels) (RID) : CE10 Hazard identification number (RID) : 50

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

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REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV).

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 2. The following requirement must

be observed: Basic requirements for the implementation of the submission (according to § 8

paragraph 1, 3 and 4).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed SZW-lijst van mutagene stoffen The substance is not listed

SZW-lijst van reprotoxische stoffen - Borstvoeding The substance is not listed : The substance is not listed

SZW-lijst van reprotoxische stoffen -Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling : The substance is not listed

Denmark

Danish National Regulations : 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

Abbreviations and acronyms:		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	

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Abbreviations and acronyms:		
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disruptor	

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 H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
H271	May cause fire or explosion; strong oxidiser.	
H302	Harmful if swallowed.	
Ox. Sol. 1	Oxidising Solids, Category 1	

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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.