Qualikems Lifesciences Pvt. Ltd.

(Formerly known as Qualikems fine chem Pvt Ltd)
Works : Plot No. 68-69,G.I.D.C Industrial Estate,Nandesari,Vadodara-391340 (Gujarat)
Telefax : 91-265-2841531,2841532,2841534,2841535.
Sales Office : 5531,Basti Harphool singh Sadar Thana Road, Delhi-110006
Tel : +91-11-23618475/23618476,Fax:+91-11-23678476
Email: salesindia@qualikems.com ,www.qualikems.com

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

Product identifiers

Product name : **Potassium persulfate**

CAS-No. : **7727-21-1**

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

Identified uses : Laboratory chemicals, Manufacture of substances

Details of the supplier of the safety data sheet

Company : Qualikems Lifesciences Pvt Ltd

Works : Plot No.
68.69,G.I.D.C Industrial
Estate, Nandesari,
Vadodara-391340 (Gujarat)

Emergency telephone number

Emergency Phone # : +91-265-2841531 (9:00am - 6:30 pm) [Office hours]

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272 / 2008

Oxidizing solids (Category 3), H272
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Respiratory sensitization (Category 1), H334
Skin sensitization (Category 1), H317
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272 / 2008

Pictogram	
Signal Word	Danger
Hazard statement(s)	
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
Precautionary statement(s)	
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.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)

Pictogram	
Signal Word	Danger
Hazard statement(s)	
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
Precautionary statement(s)	
P302 + P352	IF ON SKIN: Wash with plenty of water.
Supplemental Hazard Statements	none

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Potassium peroxodisulfate

Formula	:	$K_2S_2O_8$
Molecular weight	:	270,32 g/mol
CAS-No.	:	7727-21-1
EC-No.	:	231-781-8
Index-No.	:	016-061-00-1

Component		Classification	Concentration
Potassium persulfate			
CAS-No.	7727-21-1	Ox. Sol. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; Skin Sens. 1; STOT SE 3; H272, H302, H315, H319, H334, H317, H335	<= 100 %
EC-No.	231-781-8		
Index-No.	016-061-00-1		

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Extinguishing media Suitable

extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Sulfur oxides
Potassium oxides
Container explosion may occur under fire conditions.
Not combustible.
Has a fire-promoting effect due to release of oxygen.
Ambient fire may liberate hazardous vapours.

Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials.

Moisture sensitive.

Storage class
Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection
protective clothing

Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P2

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a)	Physical state	powder
b)	Color	white
c)	Odor	odorless
d)	Melting point/freezing point	Melting point: 100 °C
e)	Initial boiling point and boiling range	No data available
f)	Flammability (solid, gas)	The product is not flammable. - Flammability (solids)
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	Not applicable
i)	Autoignition temperature	> 600 °C - DIN 51794does not ignite
j)	Decomposition temperature	170 °C
k)	pH	2,5 - 4,5 at 27 g/l at 25 °C
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	52,77 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6-soluble
n)	Partition coefficient: n-octanol/water	- Not applicable for inorganic substances
o)	Vapor pressure	< 0,1 hPa at 25 °C - OECD Test Guideline 104
p)	Density	2,477 g/cm3
	Relative density	1,39 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3
q)	Relative vapor density	9,33 - (Air = 1.0)
r)	Particle characteristics	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	The substance or mixture is classified as oxidizing with the category 3.

Other safety information

Relative vapor density	9,33 - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity
No data available

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions
Risk of ignition or formation of inflammable gases or vapours with:
Exothermic reaction with:
Reducing agents
combustible substances
Sodium hydroxide
Potassium hydroxide
alkali hydroxides
Water

Conditions to avoid Exposure to moisture. Heat.no information available

Incompatible materials
No data available

Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - female - 700 mg/kg
(OECD Test Guideline 401)
Remarks: (in analogy to similar compounds)
The value is given in analogy to the following substances: Ammonium peroxodisulphate
LC50 Inhalation - Rat - male and female - 4 h - >= 2,95 mg/l - dust/mist

(US-EPA)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Ammonium peroxodisulphate
Inhalation: Irritating to respiratory system.
LD50 Dermal - Rat - male and female - > 2.000 mg/kg
(US-EPA)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Ammonium peroxodisulphate

Skin corrosion / irritation
Remarks: Causes skin irritation.
(Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage / eye irritation
Eyes - Rabbit
Result: Causes serious eye irritation.
(OECD Test Guideline 405)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Ammonium peroxodisulphate
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization
Freund's complete adjuvant test - Guinea pig
Result: positive
(OECD Test Guideline 406)
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: disodium peroxodisulphateTest Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Method: US-EPA
Result: negative
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: disodium peroxodisulphate
Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: disodium peroxodisulphate

Test Type: unscheduled DNA synthesis assay
Species: Rat
Cell type: Liver cells
Application Route: Oral
Method: OECD Test Guideline 486
Result: negative
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: disodium peroxodisulphate

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause respiratory irritation. - Respiratory system
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information Endocrine

disrupting properties__**Product:**__

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male - Oral - 90 Days - NOAEL (No observed adverse effect level) - 91 mg/kg - LOAEL (Lowest observed adverse effect level) - 200 mg/kg
Remarks: (in analogy to similar products)

RTECS: SE0400000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 76,3 mg/l - 96 h Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Ammonium peroxodisulphate
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 120 mg/l - 48 h Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Ammonium peroxodisulphate
Toxicity to algae	static test ErC50 - Phaeodactylum tricornutum - 320 mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: Ammonium peroxodisulphate
Toxicity to bacteria	static test EC50 - Pseudomonas putida - 36 mg/l - 18 h Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Ammonium peroxodisulphate

Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties
Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

UN number

ADR/RID: 1492	IMDG: 1492	IATA: 1492

UN proper shipping name ADR/RID:
POTASSIUM PERSULPHATEIMDG:
POTASSIUM PERSULPHATEIATA:
Potassium persulphate

Transport hazard class(es)

ADR/RID: 5.1	IMDG: 5.1	IATA: 5.1

Packaging group

ADR/RID: III	IMDG: III	IATA: III

Environmental hazards

ADR/RID: no	IMDG Marine pollutant: no	IATA: no

Special precautions for user

Tunnel restriction code	:	(E)
Further information	:	No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and / or restrictions on use

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	: OXIDISING LIQUIDS AND SOLIDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	May intensify fire; oxidizer.
H334	Harmful if swallowed.
H335	Causes skin irritation.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Qualikems Lifesciences Pvt. Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.qualikems.com for additional terms and conditions of sale.