

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 3

Revision: 27.06.2018

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

1.1 Product identifier

- Product name: **KP962 - Ammonium Persulphate Powder**
- Catalog number: 56Z096298, 56U096240, 56P096240, 56P027440
- CAS No.: 7727-54-0

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

- Application of the substance / the preparation: Reagent for water analysis

1.3 Details of the supplier of the safety data sheet

Supplier:

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de

phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@tintometer.com

Informing department:

e-mail: sds@tintometer.de
Product Safety Department

1.4 Emergency telephone number:

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS03 flame over circle

Ox. Sol. 3 H272 May intensify fire; oxidiser.



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

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Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

Signal word Danger

Hazard-determining components of labelling:

ammonium persulphate

Hazard statements

H272 May intensify fire; oxidiser.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust.
 P280 Wear protective gloves/protective clothing/eye protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P313 Get medical advice/attention.

2.3 Other hazards No further relevant information available.

Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS No. Designation:

7727-54-0 ammonium persulphate

Identification number(s):
EC No: 231-786-5

Index No: 016-060-00-6

SECTION 4: First aid measures

4.1 Description of first aid measures
General information

Personal protection for the First Aider!
 Instantly remove any clothing soiled by the product.

After inhalation Supply fresh air or oxygen; call for doctor.

After skin contact

Instantly wash with water and soap and rinse thoroughly.
 Seek medical treatment.

After eye contact Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.

After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

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- Seek medical treatment.
 - **4.2 Most important symptoms and effects, both acute and delayed:**
 - allergic reactions
 - irritations
 - after inhalation:
 - coughing
 - mucous membrane irritation
 - breathing difficulty
 - after swallowing:
 - absorption
 - sickness
 - vomiting
 - diarrhoea
 - after absorption of large amounts:
 - headache
 - drop in blood pressure
 - CNS disorders
 - cramps
 - narcotic conditions
 - respiratory paralysis
 - **Danger**
 - risk of airways sensitization
 - risk of skin sensitization
 - **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.
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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents**
 - Carbon dioxide (CO₂), Foam, Fire-extinguishing powder
 - Water spray jet
 - **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
 - **5.2 Special hazards arising from the substance or mixture**
 - The product is not combustible.
 - Has a fire-promoting effect due to release of oxygen.
 - Formation of toxic gases is possible during heating or in case of fire.
 - Can be released in case of fire:
 - nitrous gases
 - Sulphur oxides (SO_x)
 - Nitrogen oxides (NO_x)
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
 - Wear self-contained breathing apparatus.
 - Wear full protective suit.
 - **Additional information**
 - Collect contaminated fire fighting water separately. It must not enter drains.
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 - Cool endangered containers with water spray jet.
 - Ambient fire may liberate hazardous vapours.
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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**
 - Wear protective equipment. Keep unprotected persons away.
 - Avoid substance contact.
 - Ensure adequate ventilation
 - Avoid inhalation of dust.
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**
 - Ensure adequate ventilation.
 - Collect mechanically.

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Dispose of contaminated material as waste according to item 13.

- **6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- **Advice on safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Provide suction extractors if dust is formed.

- **Hygiene measures:**

Do not inhale dust / smoke / mist.

Avoid contact with the skin.

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke when using this product.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and containers:**

Store in cool location.

Protect from heat.

- **Information about storage in one common storage facility:**

Store away from flammable substances.

Store away from reducing agents.

Do not store together with acids.

Do not store together with alkalis (caustic solutions).

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

Protect from the effects of light.

Store under dry conditions.

Protect from humidity and keep away from water.

This product is hygroscopic.

- **Recommended storage temperature:** 20°C +/- 5°C

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:** Not required.

- **Recommended monitoring procedures:**

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Engineering measures:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See item 7.

- **Personal protective equipment**

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P2

- **Protection of hands:**

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves**

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

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- **Penetration time of glove material**
Breakthrough time: > 480 min
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.
- **Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· Appearance:	
Form / Physical state:	Crystalline powder
Colour:	White
· Odour: Odourless	
· Odour threshold: Not applicable	
· pH-value (100 g/l) at 20°C: 3.2	
· Melting point/Freezing point: 120°C Decomposition	
· Initial boiling point and boiling range: Not applicable	
· Flash point: Not applicable	
· Flammability (solid, gas): Contact with combustible material may cause fire.	
· Ignition temperature: Not applicable	
· Decomposition temperature: > 120 °C	
· Auto-ignition temperature: Product is not self-igniting.	
· Explosive properties: Product is not explosive.	
· Flammability or explosive limits:	
Lower:	Not applicable
Upper:	Not applicable
· Oxidising properties: May intensify fire; oxidiser.	
· Vapour pressure: Not applicable.	
· Density at 20°C: 1.98 g/cm ³	
· Relative density: Not determined.	
· Vapour density: Not applicable.	
· Evaporation rate: Not applicable.	
· Solubility(ies):	
Water at 20°C:	620 g/l Readily soluble
· Partition coefficient: n-octanol/water: Not applicable.	
· Viscosity: Not applicable.	
· Organic solvents: 0.0 %	
· Solids content: 100.0 %	
· 9.2 Other information No further relevant information available.	

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
Aqueous solution reacts acidic.
Aqueous solution reacts with metals.
Reacts with powdered metals
Reacts with reducing agents
Reacts with peroxides
Reacts with strong acids and alkali

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Reacts with ammonia (NH₃).

• **10.4 Conditions to avoid** Strong heating (decomposition)

• **10.5 Incompatible materials:**

combustible substances

organic substances

aluminium

copper

zinc

Iron

• **10.6 Hazardous decomposition products:**

Ammonia (NH₃)

oxygen

In case of fire: see section 5.

SECTION 11: Toxicological information

• **11.1 Information on toxicological effects**

• **Acute toxicity**

Harmful if swallowed.

• **LD/LC50 values that are relevant for classification:**

CAS: 7727-54-0 ammonium persulphate

Oral	LD50	495 mg/kg (rat) (OECD 401)
Dermal	LD ₀	2000 mg/kg (rat) (MERCK, ECHA)
Inhalative	LC ₀	2.95 mg/l (rat) (4h, OECD 403) (MERCK, ECHA)

• **Primary irritant effect:**

• **Skin corrosion/irritation**

Causes skin irritation.

• **Serious eye damage/irritation** Causes serious eye irritation.

• **Information on components:**

CAS: 7727-54-0 ammonium persulphate

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

• **Respiratory or skin sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

• **Information on components:**

CAS: 7727-54-0 ammonium persulphate

Sensitisation	OECD 406	(guinea pig: positive)
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• **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

• **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

• **Carcinogenicity** Based on available data, the classification criteria are not met.

• **Reproductive toxicity** Based on available data, the classification criteria are not met.

• **STOT (specific target organ toxicity) -single exposure**

May cause respiratory irritation.

• **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

• **Aspiration hazard** Based on available data, the classification criteria are not met.

• **Information on components:**

CAS: 7727-54-0 ammonium persulphate

OECD 471	(guinea pig: negative) (Bacterial Reverse Mutation Test - Ames test) (Salmonella typhimurium)
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SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity:
CAS: 7727-54-0 ammonium persulphate

 EC50 120 mg/l/48h (Daphnia magna)
(IUCLID)

 LC50 76 mg/l/96h (rainbow trout)
(IUCLID)

Bacterial toxicity:
CAS: 7727-54-0 ammonium persulphate

 EC10 36 mg/l (Pseudomonas putida) (18h)
(IUCLID)

Other information:

Toxic for fish:

sulphates > 7 g/l

NH₄⁺ > 0.3 mg/l
12.2 Persistence and degradability No further relevant information available.

Other information: Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects

Reacts with water to form toxic decomposition products.

Avoid transfer into the environment.

Water hazard:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

European waste catalogue

16 05 07* discarded inorganic chemicals consisting of or containing hazardous substances

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA

UN1444

14.2 UN proper shipping name
ADR

1444 AMMONIUM PERSULPHATE

IMDG, IATA

AMMONIUM PERSULPHATE

14.3 Transport hazard class(es)
ADR

Class

5.1 (O2) Oxidising substances.

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· Label	5.1
· IMDG, IATA	
	
· Class	5.1 Oxidising substances.
· Label	5.1
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Oxidising substances.
· Kemler Number:	50
· EMS Number:	F-A,S-Q
· Segregation groups	Ammonium compounds
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

SECTION 15: Regulatory information

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

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

Substance is not listed.

· **Directive 2012/18/EU (SEVESO III):**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category** P8 OXIDISING LIQUIDS AND SOLIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 65

· **Information about limitation of use:**

Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC).
Employment restrictions concerning young persons must be observed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

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Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 3: Oxidizing solids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

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