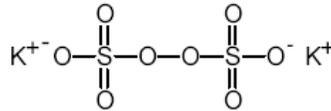


## KPS (PPS)-5

Potassium persulfate (potassium peroxodisulfate)  
CAS#7727-21-1  
Technically pure, salt

### Structural Formula



### Description

Potassium persulfate is a white, finely crystalline, odourless salt consisting of technically pure potassium peroxodisulfate and silicic acid to enhance the free flowing properties. It is used as an initiator (source of free radicals) for the polymerisation of monomers and as a strong oxidising agent in many applications. It has the particular advantage of being only slightly hygroscopic and easy and safe to handle. As a result of the process used for its production it is free from contamination by ammonium ions. As a result of its extremely high purity it has a good storage stability. Due to its fine crystallinity potassium peroxodisulfate tends to lumping.

### Technical Data

Appearance	White, finely crystalline salt
KPS (PPS) content (typically)	Ca. 99.0 % w/w
Active oxygen (typically)	Ca. 5.9 % w/w
Acid content (based on H <sub>2</sub> SO <sub>4</sub> , typically)	Ca. 0.05 %
Iron content (typically)	Ca. 1 mg/kg
Bulk density (typically)	Ca. 1100 g/l
Melting point	(decomposition)
Solubility in water at 10/20/40/60 °C	Ca. 30/50/105/210 g/l
pH of a 1% solution in water (typically)	Ca. 3.7
pH of a 10% solution in water (typically)	Ca. 3.1
Decomposition of the product as supplied	At above 65 °C
Recommended storage temperature	Below 30 °C
Storage stability as from date of delivery	12 months
Moisture content (typically)	< 0.03 %

This product is in compliance with the ElektroG (EU-Directives: RoHS 2002/95/EG, WEEE 2002/96/EG)

## Application

### Polymerisation:

Initiator for the emulsion or solution polymerisation of acrylic monomers, vinyl acetate, vinyl chloride etc. and for the emulsion copolymerisation of styrene, acrylonitrile, butadiene etc. Dosage: 0.1-0.5% KPS-5 (PPS). Temperature: 75-95°C. In combination with redox systems (ascorbic acid, Rongalit, sulfites or sugar - possibly in combination with heavy metal salts such as Fe<sup>2+</sup> it can also be used for polymerisation reactions carried out at lower - and even at ambient - temperatures. To reduce the residual monomer content, a combination of KPS-5 (PPS) with TBHP-70-AQ is recommended, particularly in cases where redox systems are used.

Cosmetics: Essential component of bleaching formulations.

Paper: Modification of starch; Repulping particularly of wet-strength paper.

Textile: Desizing agent and bleach activator - particularly for cold bleaching (e.g. bleaching of Jeans).

### Others:

- Chemical synthesis
- Water treatment (decontamination)
- Waste gas treatment; oxidative degradation of harmful substances (e.g. Hg)

## Storage

Potassium peroxodisulfate is slightly hygroscopic and must be stored under dry conditions. It has to be protected from direct sunlight and from any other source of heat.

## Standard Packaging

The standard packaging of KPS (PPS)-5 is 25 kg PE-bag.

## Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

Application and usage of our products based on our technical advice is out of our control and sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application.

United Initiators  
**EU**  
T: +49 89 74422 237  
F: +49 89 74422 6237  
cs-initiators.eu@united-in.com

United Initiators  
**Nafta**  
T: +1 800 231 2702  
F: +1 440 323 0898  
cs-initiators.nafta@united-in.com

United Initiators  
**China**  
T: +86 20 6131 1370  
F: +86 139 2503 8952  
cs-initiators.cn@united-in.com

United Initiators  
**Australia**  
T: +61 2 9316 0046  
F: +61 2 9316 0034  
cs-initiators.au@united-in.com

[www.united-initiators.com](http://www.united-initiators.com)

Revision number: 1.0. Date: 08.12.2014. Device M: TDS.