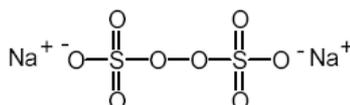


## NPS-5 (SPS)

Sodium persulfate (sodium peroxodisulfate)  
CAS#7775-27-1  
Technically pure, salt

### Structural Formula



### Description

Sodium persulfate is a white, crystalline, odourless salt consisting of technically pure sodium peroxodisulfate. It is used as an initiator (source of free radicals) for the polymerisation of monomers and as a strong oxidizing agent in many applications. It has the particular advantage of being almost non-hygroscopic, of having a good storage stability as a result of its extremely high purity and of being easy and safe to handle. As a result of the process used for its production it is free from contamination by ammonium ions.

### Technical Data

Appearance	White crystalline salt
NPS (SPS) content (typically)	Ca. 99.9 % w/w
Active oxygen (typically)	Ca. 6.7 % w/w
Acid content (based on H <sub>2</sub> SO <sub>4</sub> , typically)	Ca. 0.01 %
Iron content (typically)	Ca. 0.5 mg/kg
Bulk density (typically)	Ca. 1250 g/l
Melting point	(decomposition)
Solubility in water at 10/20/40/60°C	Ca. 515/545/605/680 g/l
pH of a 1% solution in water (typically)	Ca. 4.5
pH of a 10% solution in water (typically)	Ca. 3.5
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% NPS-5 (SPS). 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 NPS-5 (SPS) with TBHP-70-AQ is recommended, particularly in cases where redox systems are used.

### Metal treatment:

Treatment of metal surfaces (e.g. in the manufacture of semiconductors; cleaning and etching of printed circuits), activation of copper and aluminium surfaces.

Cosmetics: Essential component of bleaching formulations.

Paper: Modification of starch; Repulping 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)
- Swimming pool and spa treatment

## Storage

Sodium peroxodisulfate must be stored under dry conditions and has to be protected from direct sunlight and from any other source of heat.

## Standard Packaging

The standard packaging of NPS-5 (SPS) 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.

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