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CAROAT®

Technical Data Sheet - Persulfates

$$2\ KHSO_5 * KHSO_4 * K_2SO_4$$

Chemical Name	Potassium monopersulfate (KMPS)
CAS-No.	70693-62-8
Molar Mass	614.76 g/mol
Properties	Potassium peroxymonosulfate - triple salt: $2KHSO_5 \cdot KHSO_4 \cdot K_2SO_4$

Description

White, crystalline, odourless, free flowing salt consisting of potassium peroxymonosulfate, potassium hydrogen sulfate and potassium sulfate. The only stable transportable salt of Caro's acid is its triple salt. KMPS undergoes a strongly acid reaction in aqueous solution. As a result of its high oxidation potential and microbiological effectiveness, it can be used for a large number of different applications.
It has the particular advantage of being highly stable in storage, easy and safe to handle, free from chlorine and of having a high reactivity.

Technical Data

Property	Value(ca.)	Unit
Appearance	white crystalline salt	
$KHSO_5$ content (typically)	ca. 45	% w/w
Active oxygen (typically)	ca. 4.7	% w/w
Peroxodisulfate content (typically)	ca. 1.8	% w/w
Iron content (typically)	ca. 3	mg/kg
Bulk density (typically)	ca. 1100	g/l
Melting point	(decomposition)	
Solubility in water at 20°C	ca. 250	g/l
pH of a 1% solution in water (typically)	ca. 2.0	
Decomposition of the product as supplied	at above 60	°C
Recommended storage temperature	below 30	°C
Storage stability as from date of delivery	12	months
Moisture content (typically)	< 0.1	%

Contact: http://www.united-initiators.com/

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

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Further Data

Storage

CAROAT® must be stored under dry conditions. It has to be protected from direct sunlight and from any other sources of heat.

Application

Denture cleaner:
Effective main ingredient in cleaning tablets for dentures.
Disinfectant:
Use for chlorine-free disinfection or purification of swimming pool water and spas. Prevention of chlorine acne and eye irritation. Approved for oxidative drinking water treatment.
Bleaching agent:
CAROAT® has a bleaching effect comparable to that of organic peracids; in the TAED/perborate system it is particularly effective at low temperatures.
Biocidal effect:
Suitable as an additive to acidic cleaning agents with bleaching and disinfectant effect.
Effluent treatment:
Oxidative treatment of problematic effluents; sulfide oxidation, nitrite oxidation and cyanide detoxification (see our technical information).
Plaster additive:
Addition of CAROAT® leads to generation of oxygen and improved product characteristics (e.g. thermal insulation, water absorbency, mechanical properties).
Metal treatment:
Microetchant: Use for etching printed circuit boards
Others:
- Textile finishing (shrink proofing of wool)
- Chemical synthesis (production of dioxirane)
- Paper manufacture (repulping, particularly of wet-strength paper).