

# Salts for analysis EMSURE®





**EMSURE® inorganic salts –  
manufactured under strictly controlled  
conditions at Merck Millipore facilities  
in Darmstadt, Germany**

**Their outstanding analytical purity –  
the ideal choice for both qualitative  
and quantitative analysis**

**The broad product range of inorganic salts –  
a wide assortment that is suitable  
for analyzing various substances and  
substance mixtures**

## Benefits

- Comprehensive product range
- Standardized high quality – premium grade for reagents
- High batch-to-batch consistency
- Extensive Certificate of Analysis (CoA)
- Compliance with international standards, such as ISO, ACS and Reag. Ph Eur
- Salts are specified for pharmacopoeia analysis
- Reliability, flexibility and safety

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# Characteristics



## Safety and environment

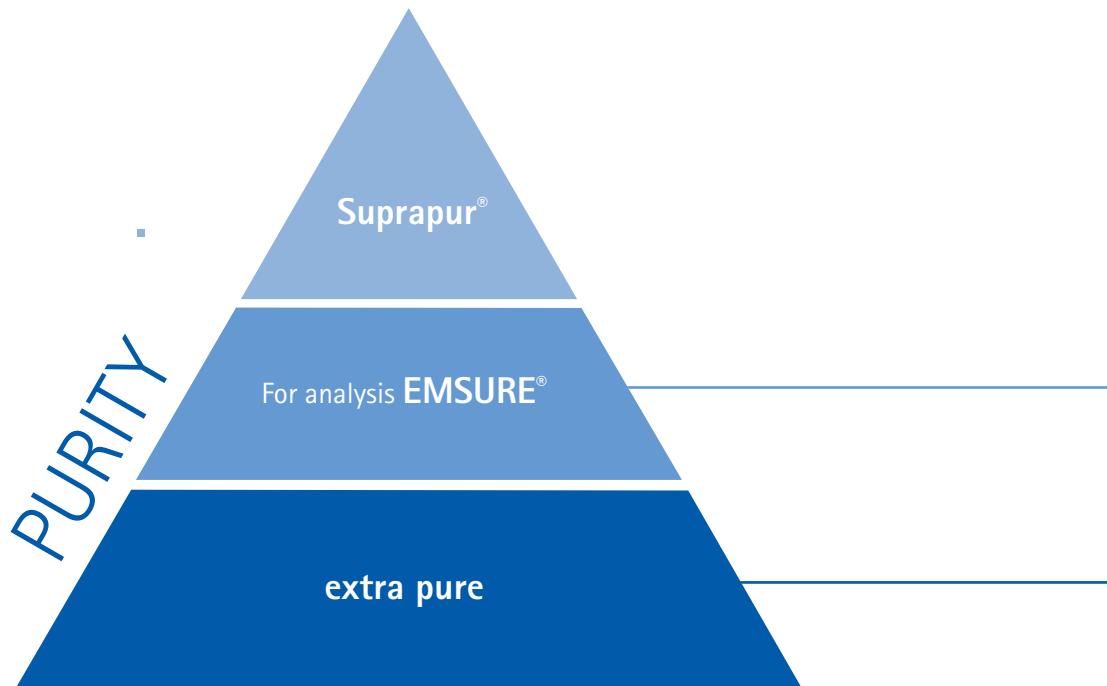
In 2010, Merck Millipore established a new production facility for inorganic salts, enabling us to increase capacity by 50 percent. This expansion and modernization is our response to a growing global demand for superior quality and product safety. The plant, which is scheduled to begin operation in mid 2011, is also our commitment to developing Darmstadt into a powerful center for Merck Millipore's chemical production.

## Quality management

Merck Millipore is certified according to the DIN EN ISO 9001 quality management systems, as well as the ISO 14001 environmental management system.

## Improved flowability

Many inorganic salts tend to cake naturally, forming hard lumps. This makes it difficult to extract the product from the pack and process it. Exact dosing is also very important for most analytical tests in order to obtain precise and reproducible results. Since chemical purity may not be altered, we looked for a solution that neither changed the guaranteed specifications nor involved any anti-caking materials. Our answer: a new and improved production process that substantially reduces the clumping of substances.



# Specification

**ACS** Standards of the American Chemical Society

**ISO** Standards of the International Organization for Standardization

**Reag. Ph Eur** Requirements for reagents specified by the European Pharmacopoeia

## Quality grades for your individual needs

### **Salts for analysis EMSURE® with ACS declaration**

ACS standards are currently the most recognized international regulations and specifications for analytical reagents. This is why Merck Millipore tests and releases reagents based on the specifications and analytical regulations of the ACS – in addition to other criteria. The 10th edition of ACS was released in 2006. Our reagent declaration always conforms to the latest version of ACS. Updates are published regularly online.

### **Salts for analysis EMSURE® specified for pharmacopoeia analysis**

Production and quality control in the pharmaceutical industry are strictly regulated. With the product designation »for analysis EMSURE® ACS, Reag. Ph Eur« Merck Millipore offers an extensive range of reagents including salts for pharmacopoeia analysis. These products conform fully to the specifications described in the reagents section of the European Pharmacopoeia as well as that of the U.S. Pharmacopoeia. Thus, quality assurance laboratories in the pharmaceutical industry benefit from the international acceptance of these reagents and the security of analytical laboratory auditing.

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### **Salts extra pure**

# Categories

## Categories A–P

Category	Definition	Area of application
A Acetates	Salts of acetic acid	Buffer substance
Antimonates	Antimony compounds with antimony in oxidation state +5	Special oxidizing agent
B Bismuthates	Bismuth compounds with bismuth in oxidation state +5	Special oxidizing agent
Bromates	Salts of bromic acid only stable in aqueous solution	Special oxidizing agent
Bromides	Salts of hydrobromic acid	Technical applications, e.g. in photography
C Carbamates	Salts of carbamic acid – stable »carbonate«	Neutralization of acids
Carbonates	Salts of carbonic acid	Buffer substance, application in neutralizing reactions
Chlorates	Salts of chloric acid	Special oxidizing agent
Chlorides	Salts of aqueous hydrogen chloride (hydrochloric acid)	Very important inorganic compounds in laboratory and production
Chromates/dichromates	Chromium compounds with chromium in oxidation state +6	Special oxidizing agent
Citrates	Salts of citric acid	Buffer substance
Cyanides	Salts of hydrogen cyanide	Complexing agent, cyaniding
D Difluorides	Acid salts of hydrofluoric acid	Etchant
Diiodates	Acid salts of iodic acid	Special oxidizing agent
Disulfates	Salts of thiosulfurous acid	Dissolution agent
Disulfites	Salts of pyrosulfurous acid	Special reducing agent
Dithionites	Salts of dithionous acid	Special reducing agent
F Fluorides	Salts of hydrofluoric acid	Reagent in complexometry, etchant
Formates	Salts of formic acid	Special reducing agent
H Hexacyanoferrates	Stable cyano complexes with iron(II) and iron(III)	Iron(II) / iron(III) detection
Hexanitrocobaltates	Stable cyano complex with cobalt	Potassium detection
Hydroxide	alkaline compounds	Starting substances for alkalis, neutralization of acids, etchants, dissolution agents
I Iodates	Salts of iodic acid	Special oxidizing agent, iodometry
Iodides	Salts of hydriodic acid	Iodometry, photograpy
M Molybdates	Molybdenum compounds with molybdenum in oxidation state +6	Phosphate detection
N Nitrates	Salts of nitric acid	Special oxidizing agent
Nitrites	Salts of nitrous acid	Laboratory reagent
O Oxalates	Salts of oxalic acid	Reducing agent in permanganometry
P Pentacyanonitrosylferrates	Cyano complex with nitrosyl ion	Laboratory reagent
Perchlorates	Salts of perchloric acid	Special oxidizing agent, potassium detection
Periodates	Salts of periodic acid	Special oxidizing agent
Permanganates	Salts of unstable permanganic acid	Special oxidizing agent, permanganometry
Peroxides	Salts with peroxy groups	Special oxidizing agent
Peroxodisulfates	Disulfates with peroxy groups	Special oxidizing agent
Phosphates	Salts of phosphoric acid	Often used buffer substances
Phthalates	Salts of phthalic acid	Alkalimetry

## Categories S–Z

Category	Definition	Area of application
S Salicylates	Salts of salicylic acid	Laboratory reagent
Selenites	Salts of selenous acid	Special reducing agent, technical applications (e.g. trace element, free-radical scavenger)
Sulfates	Salts of sulfuric acid	Very important inorganic compound in laboratory and production
Sulfides	Salts of hydrosulfuric acid	H <sub>2</sub> S development, heavy metal precipitation
Sulfites	Salts of sulfurous acid	Special reducing agent
T Tartrates	Salts of tartaric acid	Special marker in complexometry, buffer substance
Thiocyanates	Salts of unstable thiocyanic acid	Iron(III) detection
Thiosulfates	Salts of unstable thiosulfuric acid	Iodometry and photography
Tungstates	Tungsten compounds with tungsten in oxidation state +6	Special oxidizing agent, Folin-Ciocalteus's phenol determination
V Vanadates	Vanadium compounds with vanadium in oxidation state +5	Special oxidizing agent, phosphate determination



# Storage instructions

## Recommended storage instructions

We recommend storing all inorganic salts – with the exception of the compounds listed here – in airtight containers in a dry place at room temperature when possible. Further storage instructions are included in our Safety Data Sheets.

## Higher water of crystallization content

In case of temperature fluctuations, products with a higher water of crystallization content have a greater tendency to cake than anhydrous salts. In addition, many products tend to decompose when exposed to heat. These compounds should therefore be stored in a dry place that is as cool as possible or at room temperature (max. 25°C). Please follow the storage instructions on the labels of the products.

### Store in a cool place [below 25°C]

Product	Catalogue No.
A Ammonium carbamate for analysis EMSURE®	101134
Ammonium fluoride for analysis EMSURE® ACS	101164
Ammonium iron(III) sulfate dodecahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	103776
Ammonium iron(II) sulfate hexahydrate for analysis EMSURE® ISO	103792
Ammonium peroxodisulfate for analysis EMSURE® ACS, Reag. Ph Eur	101201
I Iron(III) chloride hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	103943
Iron(II) sulfate heptahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	103965
M Magnesium hydroxide carbonate for analysis EMSURE®	105827
Manganese(II) sulfate tetrahydrate for analysis EMSURE®	102786
S Sodium carbonate decahydrate for analysis EMSURE® ISO, Reag. Ph Eur	106391
di-Sodium hydrogen phosphate anhydrous for analysis particle size about 0.2–1.0 mm (~ 18–80 mesh ASTM) EMSURE®	106559
di-Sodium hydrogen phosphate dodecahydrate for analysis EMSURE® ISO, Reag. Ph Eur	106579
di-Sodium hydrogen phosphate heptahydrate for analysis EMSURE® ACS	106575
Sodium peroxidisulfate for analysis EMSURE®	106609
Sodium sulfate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	106648
T Tin(II) chloride dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	107815
Tin(II) chloride dihydrate for analysis (max. 0.000001% Hg) EMSURE®	107814

# Salts for analysis

## FAQ's

### **What enables Merck Millipore to provide highly specified salts for analytical use?**

Our state-of-the-art production facilities in Darmstadt, and close cooperation with our customers.

### **Are Merck Millipore reagents for analytical use ACS certified?**

Yes, Merck Millipore offers ACS validated reagents.

### **What is ACS validation?**

ACS validation is a comparison of the methods described by ACS with internally applied methods.

### **What kind of anti-caking additives does Merck Millipore use?**

None. Due to the analytical purity of EMSURE® salts it is not possible to use anti-caking agents.

### **How do Merck Millipore salts achieve improved flowability?**

Improved flowability is attained through optimization during the production process.



# Ordering information Salts | EMSURE®

## Salts A

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
A Aluminium ammonium sulfate dodecahydrate for analysis EMSURE® ACS	7784-26-1	$\text{NH}_4\text{Al}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$	453.33 g/mol	500 g	Plastic bottle	1.01031.0500
Aluminium nitrate nonahydrate for analysis EMSURE®	7784-27-2	$\text{Al}(\text{NO}_3)_3 \cdot 9 \text{H}_2\text{O}$	375.13 g/mol	500 g	Plastic bottle	1.01063.0500
				50 kg	Fibre carton	1.01063.9050
Aluminium potassium sulfate dodecahydrate for analysis EMSURE® ACS, Reag. Ph Eur	7784-24-9	$\text{KAl}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$	474.39 g/mol	1 kg	Plastic bottle	1.01047.1000
Ammonium acetate for analysis EMSURE® ACS, Reag. Ph Eur	631-61-8	$\text{CH}_3\text{COONH}_4$	77.08 g/mol	500 g	Plastic bottle	1.01116.0500
				1 kg	Plastic bottle	1.01116.1000
				5 kg	Plastic bottle	1.01116.5000
				50 kg	Fibre carton	1.01116.9050
Ammonium amidosulfonate for analysis EMSURE® ACS, Reag. Ph Eur	7773-06-0	$\text{H}_2\text{NSO}_3\text{NH}_4$	114.13 g/mol	100 g	Plastic bottle	1.01220.0100
Ammonium bromide for analysis EMSURE® ACS	12124-97-9	$\text{NH}_4\text{Br}$	97.94 g/mol	1 kg	Plastic bottle	1.01125.1000
				25 kg	Fibre carton	1.01125.9025
Ammonium carbamate for analysis EMSURE®	1111-78-0	$\text{H}_2\text{NCOONH}_4$	78.07 g/mol	500 g	Plastic bottle	1.01134.0500
Ammonium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	10361-29-2	$\text{CH}_6\text{N}_2\text{O}_2 \cdot \text{CH}_5\text{NO}_3$	157.13 g/mol	250 g	Plastic bottle	1.59504.0250
				1 kg	Plastic bottle	1.59504.1000
				5 kg	Plastic bottle	1.59504.5000
Ammonium cerium(IV) nitrate for analysis EMSURE® ACS, Reag. Ph Eur	16774-21-3	$(\text{NH}_4)_2[\text{Ce}(\text{NO}_3)_6]$	548.22 g/mol	100 g	Plastic bottle	1.02276.0100
				1 kg	Plastic bottle	1.02276.1000
Ammonium cerium(IV) sulfate dihydrate for analysis EMSURE® ACS	10378-47-9	$(\text{NH}_4)_4\text{Ce}(\text{SO}_4)_4 \cdot 2 \text{H}_2\text{O}$	632.55 g/mol	100 g	Plastic bottle	1.02273.0100
Ammonium chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	12125-02-9	$\text{NH}_4\text{Cl}$	53.49 g/mol	500 g	Plastic bottle	1.01145.0500
				1 kg	Plastic bottle	1.01145.1000
				5 kg	Plastic bottle	1.01145.5000
				25 kg	Fibre carton	1.01145.9025
				50 kg	Fibre carton	1.01145.9050
Ammonium dihydrogen phosphate for analysis EMSURE® ACS, Reag. Ph Eur	7722-76-1	$(\text{NH}_4)\text{H}_2\text{PO}_4$	115.02 g/mol	500 g	Plastic bottle	1.01126.0500
				50 kg	Fibre carton	1.01126.9050
Ammonium fluoride for analysis EMSURE® ACS	12125-01-8	$\text{NH}_4\text{F}$	37.04 g/mol	250 g	Plastic bottle	1.01164.0250
				1 kg	Plastic bottle	1.01164.1000
				25 kg	Fibre carton	1.01164.9025
Ammonium heptamolybdate tetrahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	12054-85-2	$(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4 \text{H}_2\text{O}$	1.235.86 g/mol	250 g	Plastic bottle	1.01182.0250
				1 kg	Plastic bottle	1.01182.1000
				5 kg	Plastic bottle	1.01182.5000
di-Ammonium hydrogen citrate for analysis EMSURE® ACS, Reag. Ph Eur	3012-65-5	$\text{C}_6\text{H}_8\text{O}_7 \cdot 2 \text{NH}_3$	226.19 g/mol	500 g	Plastic bottle	1.01154.0500
				2.5 kg	Plastic bottle	1.01154.2500
				50 kg	Fibre carton	1.01154.9050
di-Ammonium hydrogen phosphate for analysis EMSURE® ACS, Reag. Ph Eur	7783-28-0	$(\text{NH}_4)_2\text{HPO}_4$	132.05 g/mol	500 g	Plastic bottle	1.01207.0500
				50 kg	Fibre carton	1.01207.9050
Ammonium iron(III) sulfate dodecahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7783-83-7	$(\text{NH}_4)\text{Fe}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$	482.19 g/mol	500 g	Plastic bottle	1.03776.0500
				1 kg	Plastic bottle	1.03776.1000
				5 kg	Plastic bottle	1.03776.5000
				50 kg	Fibre carton	1.03776.9050

## Salts A-C

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
A Ammonium iron(II) sulfate hexahydrate for analysis EMSURE® ISO	7783-85-9	$(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \cdot 6 \text{H}_2\text{O}$	392.14 g/mol	500 g	Plastic bottle	1.03792.0500
				1 kg	Plastic bottle	1.03792.1000
				5 kg	Plastic bottle	1.03792.5000
				50 kg	Fibre carton	1.03792.9050
Ammonium nitrate for analysis EMSURE® ACS	6484-52-2	$\text{NH}_4\text{NO}_3$	80.04 g/mol	500 g	Plastic bottle	1.01188.0500
				1 kg	Plastic bottle	1.01188.1000
				5 kg	Plastic bottle	1.01188.5000
di-Ammonium oxalate monohydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	6009-70-7	$(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$	142.11 g/mol	250 g	Plastic bottle	1.01192.0250
				1 kg	Plastic bottle	1.01192.1000
Ammonium peroxodisulfate for analysis EMSURE® ACS, Reag. Ph Eur	7727-54-0	$(\text{NH}_4)_2\text{S}_2\text{O}_8$	228.19 g/mol	500 g	Plastic bottle	1.01201.0500
				1 kg	Plastic bottle	1.01201.1000
				5 kg	Plastic bottle	1.01201.5000
				50 kg	Fibre carton	1.01201.9050
Ammonium sulfate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7783-20-2	$(\text{NH}_4)_2\text{SO}_4$	132.14 g/mol	100 g	Plastic bottle	1.01217.0100
				1 kg	Plastic bottle	1.01217.1000
				5 kg	Plastic bottle	1.01217.5000
				25 kg	Fibre carton	1.01217.9025
				50 kg	Fibre carton	1.01217.9050
Ammonium thiocyanate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1762-95-4	$\text{NH}_4\text{SCN}$	76.11 g/mol	500 g	Plastic bottle	1.01213.0500
				25 kg	Fibre carton	1.01213.9025
B Barium acetate for analysis EMSURE® ACS	543-80-6	$\text{Ba}(\text{CH}_3\text{COO})_2$	255.42 g/mol	500 g	Plastic bottle	1.01704.0500
				250 g	Plastic bottle	1.01714.0250
Barium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	513-77-9	$\text{BaCO}_3$	197.34 g/mol	1 kg	Plastic bottle	1.01714.1000
				500 g	Plastic bottle	1.01719.0500
Barium chloride dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10326-27-9	$\text{BaCl}_2 \cdot 2 \text{H}_2\text{O}$	244.28 g/mol	1 kg	Plastic bottle	1.01719.1000
				5 kg	Plastic bottle	1.01719.5000
				50 kg	Fibre carton	1.01719.9050
				500 g	Plastic bottle	1.01737.0500
Barium hydroxide octahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	12230-71-6	$\text{Ba}(\text{OH})_2 \cdot 8 \text{H}_2\text{O}$	315.48 g/mol	250 g	Plastic bottle	1.01729.0500
				50 kg	Fibre carton	1.01729.9050
Barium perchlorate anhydrous for analysis EMSURE®	13465-95-7	$\text{Ba}(\text{ClO}_4)_2$	336.23 g/mol	250 g	Metal can	1.01738.0250
				1 kg	Metal can	1.01738.1000
Bismuth(III) nitrate alkaline for analysis EMSURE® Reag. Ph Eur	1304-85-4	$\text{Bi}_5\text{O}(\text{OH})_9(\text{NO}_3)_4$	1461.99 g/mol	100 g	Plastic bottle	1.01878.0100
C Cadmium acetate dihydrate for analysis EMSURE®	5743-04-4	$(\text{CH}_3\text{COO})_2\text{Cd} \cdot 2 \text{H}_2\text{O}$	266.52 g/mol	500 g	Plastic bottle	1.02003.0500
				100 g	Plastic bottle	1.02027.0100
Cadmium sulfate hydrate for analysis EMSURE® ACS	7790-84-3	$3 \text{CdSO}_4 \cdot 8 \text{H}_2\text{O}$	769.51 g/mol	250 g	Plastic bottle	1.02066.0250
				1 kg	Plastic bottle	1.02066.1000
				50 kg	Fibre carton	1.02066.9050
Calcium carbonate precipitated for analysis EMSURE® Reag. Ph Eur	471-34-1	$\text{CaCO}_3$	100.09 g/mol	500 g	Plastic bottle	1.02067.0500
Calcium carbonate precipitated for analysis of silicates EMSURE®	471-34-1	$\text{CaCO}_3$	100.09 g/mol	500 g	Plastic bottle	1.02067.0500

# Ordering information Salts | EMSURE®

## Salts C–H

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
C Calcium chloride dihydrate for analysis EMSURE® ACS, Reag. Ph Eur	10035-04-8	$\text{CaCl}_2 \cdot 2 \text{H}_2\text{O}$	147.02 g/mol	250 g	Plastic bottle	1.02382.0250
				500 g	Plastic bottle	1.02382.0500
				1 kg	Plastic bottle	1.02382.1000
				5 kg	Plastic bottle	1.02382.5000
				25 kg	Fibre carton	1.02382.9025
				50 kg	Fibre carton	1.02382.9050
Calcium hydroxide for analysis EMSURE® ACS, Reag. Ph Eur	1305-62-0	$\text{Ca}(\text{OH})_2$	74.09 g/mol	500 g	Plastic bottle	1.02047.0500
				1 kg	Plastic bottle	1.02047.1000
				50 kg	Fibre carton	1.02047.9050
Calcium nitrate tetrahydrate for analysis EMSURE® ACS	13477-34-4	$\text{Ca}(\text{NO}_3)_2 \cdot 4 \text{H}_2\text{O}$	236.15 g/mol	500 g	Plastic bottle	1.02121.0500
				50 kg	Fibre carton	1.02121.9050
Calcium sulfate dihydrate precipitated for analysis EMSURE®	10101-41-4	$\text{CaSO}_4 \cdot 2 \text{H}_2\text{O}$	172.17 g/mol	500 g	Plastic bottle	1.02161.0500
Cerium(IV) sulfate tetrahydrate for analysis EMSURE®	10294-42-5	$\text{Ce}(\text{SO}_4)_2 \cdot 4 \text{H}_2\text{O}$	404.30 g/mol	25 g	Plastic bottle	1.02274.0025
				100 g	Plastic bottle	1.02274.0100
				250 g	Plastic bottle	1.02274.0250
Chromium(III) nitrate nonahydrate for analysis EMSURE®	7789-02-8	$\text{Cr}(\text{NO}_3)_3 \cdot 9 \text{H}_2\text{O}$	400.15 g/mol	250 g	Plastic bottle	1.02481.0250
Chromium(III) potassium sulfate dodecahydrate for analysis EMSURE® ACS, Reag. Ph Eur	7788-99-0	$\text{KCr}(\text{SO}_4)_2 \cdot 12 \text{H}_2\text{O}$	499.41 g/mol	250 g	Plastic bottle	1.01036.0250
Cobalt(II) acetate tetrahydrate for analysis EMSURE® ACS	6147-53-1	$(\text{CH}_3\text{COO})_2\text{Co} \cdot 4 \text{H}_2\text{O}$	249.08 g/mol	100 g	Plastic bottle	1.02529.0100
Cobalt(II) chloride hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	7791-13-1	$\text{CoCl}_2 \cdot 6 \text{H}_2\text{O}$	237.93 g/mol	100 g	Plastic bottle	1.02539.0100
				250 g	Plastic bottle	1.02539.0250
Cobalt(II) nitrate hexahydrate for analysis EMSURE®	10026-22-9	$\text{Co}(\text{NO}_3)_2 \cdot 6 \text{H}_2\text{O}$	291.04 g/mol	100 g	Plastic bottle	1.02536.0100
				250 g	Plastic bottle	1.02536.0250
Cobalt(II) nitrate hexahydrate for analysis (max. 0.001% Ni) EMSURE® ACS, Reag. Ph Eur	10026-22-9	$\text{Co}(\text{NO}_3)_2 \cdot 6 \text{H}_2\text{O}$	291.04 g/mol	50 g	Plastic bottle	1.02554.0050
				250 g	Plastic bottle	1.02554.0250
Cobalt(II) sulfate heptahydrate for analysis EMSURE®	10026-24-1	$\text{CoSO}_4 \cdot 7 \text{H}_2\text{O}$	281.10 g/mol	100 g	Plastic bottle	1.02556.0100
				250 g	Plastic bottle	1.02556.0250
Copper(II) acetate monohydrate for analysis EMSURE® ACS	6046-93-1	$(\text{CH}_3\text{COO})_2\text{Cu} \cdot \text{H}_2\text{O}$	199.65 g/mol	250 g	Plastic bottle	1.02711.0250
Copper(I) chloride for analysis EMSURE® ACS	7758-89-6	$\text{CuCl}$	99 g/mol	250 g	Plastic bottle	1.02739.0250
Copper(II) chloride dihydrate for analysis EMSURE® ACS, Reag. Ph Eur	10125-13-0	$\text{CuCl}_2 \cdot 2 \text{H}_2\text{O}$	170.48 g/mol	250 g	Plastic bottle	1.02733.0250
				1 kg	Plastic bottle	1.02733.1000
Copper(II) nitrate trihydrate for analysis EMSURE®	10031-43-3	$\text{Cu}(\text{NO}_3)_2 \cdot 3 \text{H}_2\text{O}$	241.60 g/mol	250 g	Plastic bottle	1.02753.0250
				1 kg	Plastic bottle	1.02753.1000
				25 kg	Fibre carton	1.02753.9025
Copper(II) sulfate anhydrous for analysis EMSURE®	7758-98-7	$\text{CuSO}_4$	159.61 g/mol	250 g	Plastic bottle	1.02791.0250
				1 kg	Plastic bottle	1.02791.1000
Copper(II) sulfate pentahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7758-99-8	$\text{CuSO}_4 \cdot 5 \text{H}_2\text{O}$	249.68 g/mol	250 g	Plastic bottle	1.02790.0250
				1 kg	Plastic bottle	1.02790.1000
				5 kg	Plastic bottle	1.02790.5000
				50 kg	Fibre carton	1.02790.9050

## Salts I–L

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
I Iron(III) chloride hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	10025-77-1	$\text{FeCl}_3 \cdot 6 \text{H}_2\text{O}$	270.33 g/mol	250 g	Plastic bottle	1.03943.0250
				1 kg	Plastic bottle	1.03943.1000
				25 kg	Plastic drum	1.03943.9025
Iron(II) chloride tetrahydrate for analysis EMSURE®	13478-10-9	$\text{FeCl}_2 \cdot 4 \text{H}_2\text{O}$	198.83 g/mol	250 g	Plastic bottle	1.03861.0250
				1 kg	Plastic bottle	1.03861.1000
				50 kg	Plastic drum	1.03861.9050
Iron(III) nitrate nonahydrate for analysis EMSURE® ACS, Reag. Ph Eur	7782-61-8	$\text{Fe}(\text{NO}_3)_3 \cdot 9 \text{H}_2\text{O}$	404.00 g/mol	250 g	Plastic bottle	1.03883.0250
				1 kg	Plastic bottle	1.03883.1000
				50 kg	Steel drum	1.03883.9050
Iron(III) phosphate for analysis calcined (max. 0.001% $\text{SO}_4$ ) EMSURE®	10045-86-0	$\text{FePO}_4$	150.82 g/mol	100 g	Plastic bottle	1.03935.0100
				500 g	Plastic bottle	1.03935.0500
Iron(II) sulfate heptahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7782-63-0	$\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$	278.02 g/mol	100 g	Plastic bottle	1.03965.0100
				500 g	Plastic bottle	1.03965.0500
				1 kg	Plastic bottle	1.03965.1000
				5 kg	Plastic bottle	1.03965.5000
				25 kg	Plastic drum	1.03965.9025
L Lead(II) acetate trihydrate for analysis EMSURE® ACS, Reag. Ph Eur	6080-56-4	$(\text{CH}_3\text{COO})_2\text{Pb} \cdot 3 \text{H}_2\text{O}$	379.34 g/mol	250 g	Plastic bottle	1.07375.0250
				1 kg	Plastic bottle	1.07375.1000
Lead(II) carbonate for analysis EMSURE® ACS	598-63-0	$\text{PbCO}_3$	267.21 g/mol	250 g	Plastic bottle	1.07381.0250
Lead(II) hydroxide acetate anhydrous, for the analysis of sugar acc. to Horne EMSURE® ACS	51404-69-4	$(\text{CH}_3\text{COO})_2\text{Pb} \cdot \text{Pb}(\text{OH})_2$	566.50 g/mol	1 kg	Plastic bottle	1.07414.1000
				30 kg	Fibre carton	1.07414.9030
Lead(II) nitrate for analysis EMSURE® ACS, Reag. Ph Eur	10099-74-8	$\text{Pb}(\text{NO}_3)_2$	331.2 g/mol	100 g	Plastic bottle	1.07398.0100
				1 kg	Plastic bottle	1.07398.1000
Lithium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	554-13-2	$\text{Li}_2\text{CO}_3$	73.89 g/mol	250 g	Plastic bottle	1.05680.0250
Lithium chloride for analysis EMSURE® ACS, Reag. Ph Eur	7447-41-8	$\text{LiCl}$	42.39 g/mol	100 g	Plastic bottle	1.05679.0100
				250 g	Plastic bottle	1.05679.0250
Lithium sulfate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	10102-25-7	$\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$	127.96 g/mol	250 g	Plastic bottle	1.05694.0250

# Ordering information Salts | EMSURE®

## Salts M

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
M Magnesium acetate tetrahydrate for analysis EMSURE® ACS, Reag. Ph Eur	16674-78-5	(CH <sub>3</sub> COO) <sub>2</sub> Mg · 4 H <sub>2</sub> O	214.46 g/mol	250 g	Plastic bottle	1.05819.0250
				1 kg	Plastic bottle	1.05819.1000
				50 kg	Fibre carton	1.05819.9050
Magnesium chloride hexahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7791-18-6	MgCl <sub>2</sub> · 6 H <sub>2</sub> O	203.30 g/mol	250 g	Plastic bottle	1.05833.0250
				1 kg	Plastic bottle	1.05833.1000
				5 kg	Plastic bottle	1.05833.5000
				25 kg	Fibre carton	1.05833.9025
				50 kg	Fibre carton	1.05833.9050
Magnesium hydroxide carbonate for analysis EMSURE®	12125-28-9	~ 4 MgCO <sub>3</sub> · Mg(OH) <sub>2</sub> · 5 H <sub>2</sub> O	485 g/mol	250 g	Plastic bottle	1.05827.0250
				1 kg	Plastic bottle	1.05827.1000
Magnesium nitrate hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	13446-18-9	Mg(NO <sub>3</sub> ) <sub>2</sub> · 6 H <sub>2</sub> O	256.41 g/mol	500 g	Plastic bottle	1.05853.0500
				25 kg	Plastic drum	1.05853.9025
Magnesium perchlorate hydrate [about 83% Mg(ClO <sub>4</sub> ) <sub>2</sub> ] for analysis EMSURE®	64010-42-0	Mg(ClO <sub>4</sub> ) <sub>2</sub> · x H <sub>2</sub> O	-	100 g	Metal can	1.05874.0100
				500 g	Metal can	1.05874.0500
Magnesium sulfate anhydrous for analysis EMSURE®	7487-88-9	MgSO <sub>4</sub>	120.37 g/mol	1 kg	Glass bottle	1.06067.1000
				25 kg	Plastic drum	1.06067.9025
Magnesium sulfate heptahydrate for analysis EMSURE® ACS, Reag. Ph Eur	10034-99-8	MgSO <sub>4</sub> · 7 H <sub>2</sub> O	246.48 g/mol	500 g	Plastic bottle	1.05886.0500
				1 kg	Plastic bottle	1.05886.1000
				5 kg	Plastic bottle	1.05886.5000
				50 kg	Fibre carton	1.05886.9050
Manganese(II) chloride dihydrate for analysis EMSURE®	20603-88-7	MnCl <sub>2</sub> · 2 H <sub>2</sub> O	161.87 g/mol	100 g	Plastic bottle	1.05934.0100
				1 kg	Plastic bottle	1.05934.1000
Manganese(II) chloride tetrahydrate for analysis EMSURE® ACS	13446-34-9	MnCl <sub>2</sub> · 4 H <sub>2</sub> O	197.91 g/mol	100 g	Plastic bottle	1.05927.0100
				1 kg	Plastic bottle	1.05927.1000
Manganese(II) nitrate tetrahydrate for analysis EMSURE®	20694-39-7	Mn(NO <sub>3</sub> ) <sub>2</sub> · 4 H <sub>2</sub> O	251.01 g/mol	500 g	Plastic bottle	1.05940.0500
				1 kg	Plastic bottle	1.05940.1000
				5 kg	Plastic bottle	1.05940.5000
Manganese(II) sulfate monohydrate spray-dried for analysis EMSURE® ACS, Reag. Ph Eur	10034-96-5	MnSO <sub>4</sub> · 4 H <sub>2</sub> O	169.02 g/mol	250 g	Plastic bottle	1.05941.0250
				25 kg	Fibre carton	1.05941.9025
Manganese(II) sulfate tetrahydrate for analysis EMSURE®	10101-68-5	MnSO <sub>4</sub> · H <sub>2</sub> O	223.06 g/mol	1 kg	Plastic bottle	1.02786.1000
				25 kg	Fibre carton	1.02786.9025
Mercury extra pure	7439-97-6	Hg	200.59 g/mol	250 g	Plastic bottle	1.04401.0250
				1 kg	Plastic bottle	1.04401.1000
Mercury for analysis and for polarography EMSURE®	7439-97-6	Hg	200.59 g/mol	250 g	Plastic bottle	1.04403.0250
				1 kg	Plastic bottle	1.04403.1000
Mercury(II) acetate for analysis EMSURE® ACS, Reag. Ph Eur	1600-27-7	Hg(CH <sub>3</sub> COO) <sub>2</sub>	318.68 g/mol	50 g	Plastic bottle	1.04410.0050
				250 g	Plastic bottle	1.04410.0250
Mercury(II) bromide for analysis EMSURE® ACS, Reag. Ph Eur	7789-47-1	HgBr <sub>2</sub>	360.39 g/mol	50 g	Plastic bottle	1.04421.0050
				250 g	Plastic bottle	1.04421.0250
Mercury(I) chloride for analysis EMSURE®	10112-91-1	Hg <sub>2</sub> Cl <sub>2</sub>	472.08 g/mol	50 g	Plastic bottle	1.04425.0050
				250 g	Plastic bottle	1.04425.0250
Mercury(II) chloride extra pure fine cryst.	7487-94-7	HgCl <sub>2</sub>	271.5 g/mol	100 g	Plastic bottle	1.04417.0100
				1 kg	Plastic bottle	1.04417.1000
Mercury(II) chloride for analysis EMSURE® ACS, Reag. Ph Eur	7487-94-7	HgCl <sub>2</sub>	271.5 g/mol	50 g	Plastic bottle	1.04419.0050
				250 g	Plastic bottle	1.04419.0250
				1 kg	Plastic bottle	1.04419.1000
Mercury(II) iodide red, for analysis EMSURE® ACS, Reag. Ph Eur	7774-29-0	HgI <sub>2</sub>	454.39 g/mol	50 g	Plastic bottle	1.04428.0050
				250 g	Plastic bottle	1.04428.0250

## Salts M–P

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
M Mercury(II) iodide red, extra pure	7774-29-0	HgI <sub>2</sub>	454.39 g/mol	100 g	Plastic bottle	1.04420.0100
				1 kg	Plastic bottle	1.04420.1000
Mercury(I) nitrate dihydrate for analysis EMSURE®	14836-60-3	Hg <sub>2</sub> (NO <sub>3</sub> ) <sub>2</sub> · 2 H <sub>2</sub> O	561.22 g/mol	50 g	Plastic bottle	1.04437.0050
				250 g	Plastic bottle	1.04437.0250
Mercury(II) nitrate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	7783-34-8	Hg(NO <sub>3</sub> ) <sub>2</sub> · H <sub>2</sub> O	342.62 g/mol	50 g	Plastic bottle	1.04439.0050
				250 g	Plastic bottle	1.04439.0250
Mercury(II) oxide red extra pure	21908-53-2	HgO	216.58 g/mol	100 g	Plastic bottle	1.04465.0100
Mercury(II) oxide red, for analysis EMSURE®	21908-53-2	HgO	216.58 g/mol	50 g	Plastic bottle	1.04466.0050
				250 g	Plastic bottle	1.04466.0250
Mercury(II) sulfate extra pure	7783-35-9	HgSO <sub>4</sub>	296.65 g/mol	100 g	Plastic bottle	1.04481.0100
				250 g	Plastic bottle	1.04481.0250
				1 kg	Plastic bottle	1.04481.1000
Mercury(II) sulfate for analysis EMSURE® ACS	7783-35-9	HgSO <sub>4</sub>	296.65 g/mol	50 g	Plastic bottle	1.04480.0050
				250 g	Plastic bottle	1.04480.0250
Mercury(II) thiocyanate for analysis EMSURE®, Reag. Ph Eur	592-85-8	Hg(SCN) <sub>2</sub>	316.76 g/mol	25 g	Glass bottle	1.04484.0025
				100 g	Glass bottle	1.04484.0100
N Nickel(II) chloride hexahydrate for analysis EMSURE® ACS	7791-20-0	NiCl <sub>2</sub> · 6 H <sub>2</sub> O	237.70 g/mol	250 g	Plastic bottle	1.06717.0250
				1 kg	Plastic bottle	1.06717.1000
Nickel(II) nitrate hexahydrate for analysis EMSURE® ACS	13478-00-7	Ni(NO <sub>3</sub> ) <sub>2</sub> · 6 H <sub>2</sub> O	290.81 g/mol	100 g	Plastic bottle	1.06721.0100
				250 g	Plastic bottle	1.06721.0250
				1 kg	Plastic bottle	1.06721.1000
Nickel(II) sulfate hexahydrate for analysis EMSURE® ACS	10101-97-0	NiSO <sub>4</sub> · 6 H <sub>2</sub> O	262.86 g/mol	100 g	Plastic bottle	1.06727.0100
				250 g	Plastic bottle	1.06727.0250
				1 kg	Plastic bottle	1.06727.1000
P Potassium bromate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7758-01-2	KBrO <sub>3</sub>	167 g/mol	100 g	Metal can	1.04912.0100
				250 g	Metal can	1.04912.0250
Potassium bromide for analysis EMSURE® ACS, Reag. Ph Eur	7758-02-3	KBr	119.00 g/mol	500 g	Plastic bottle	1.04905.0500
Potassium carbonate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	584-08-7	K <sub>2</sub> CO <sub>3</sub>	138.21 g/mol	500 g	Plastic bottle	1.04928.0500
				1 kg	Plastic bottle	1.04928.1000
				50 kg	Fibre carton	1.04928.9050
Potassium chlorate for analysis EMSURE®	3811-04-9	KClO <sub>3</sub>	122.55 g/mol	100 g	Metal can	1.04944.0100
				500 g	Metal can	1.04944.0500
Potassium chloride for analysis (≤ 0.005% Br) EMSURE® ACS, ISO, Reag. Ph Eur	7447-40-7	KCl	74.55 g/mol	500 g	Plastic bottle	1.04933.0500
Potassium chloride for analysis EMSURE®	7447-40-7	KCl	74.55 g/mol	250 g	Plastic bottle	1.04936.0250
				500 g	Plastic bottle	1.04936.0500
				1 kg	Plastic bottle	1.04936.1000
				5 kg	Plastic bottle	1.04936.5000
				50 kg	Fibre carton	1.04936.9050
Potassium chromate for analysis EMSURE® ACS, Reag. Ph Eur	7789-00-6	K <sub>2</sub> CrO <sub>4</sub>	194.19 g/mol	250 g	Plastic bottle	1.04952.0250
				1 kg	Plastic bottle	1.04952.1000
Potassium cyanide for analysis EMSURE® ACS, Reag. Ph Eur	151-50-8	KCN	65.12 g/mol	100 g	Plastic bottle	1.04967.0100
				250 g	Plastic bottle	1.04967.0250
				1 kg	Plastic bottle	1.04967.1000
Potassium dichromate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7778-50-9	K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	294.19 g/mol	500 g	Plastic bottle	1.04864.0500
				1 kg	Plastic bottle	1.04864.1000
				5 kg	Plastic bottle	1.04864.5000

# Ordering information Salts | EMSURE®

## Salts P

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
P Potassium dichromate for analysis (max. 0.000001% Hg) EMSURE® ACS, ISO	7778-50-9	K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	294.19 g/mol	500 g	Glass bottle	1.04865.0500
Potassium dihydrogen phosphate for analysis ( $\leq$ 0.005% Na) EMSURE® ACS, ISO, Reag. Ph Eur	7778-77-0	KH <sub>2</sub> PO <sub>4</sub>	136.08 g/mol	1 kg	Plastic bottle	1.04877.1000
				25 kg	Fibre carton	1.04877.9025
Potassium dihydrogen phosphate for analysis EMSURE® ISO	7778-77-0	KH <sub>2</sub> PO <sub>4</sub>	136.08 g/mol	250 g	Plastic bottle	1.04873.0250
				1 kg	Plastic bottle	1.04873.1000
				5 kg	Plastic bottle	1.04873.5000
				25 kg	Fibre carton	1.04873.9025
				50 kg	Fibre carton	1.04873.9050
Potassium disulfate (Potassium pyrosulfate) for analysis EMSURE® ACS	7790-62-7	K <sub>2</sub> S <sub>2</sub> O <sub>7</sub>	254.33 g/mol	1 kg	Plastic bottle	1.05107.1000
				5 kg	Plastic bottle	1.05107.5000
				50 kg	Fibre carton	1.05107.9050
Potassium disulfite for analysis EMSURE®	16731-55-8	K <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	222.33 g/mol	500 g	Plastic bottle	1.05057.0500
				1 kg	Plastic bottle	1.05057.1000
				2.5 kg	Plastic bottle	1.05057.2500
Potassium fluoride for analysis EMSURE® ACS	7789-23-3	KF	58.1 g/mol	250 g	Plastic bottle	1.04994.0250
				1 kg	Plastic bottle	1.04994.1000
Potassium hexacyanoferrate(III) for analysis EMSURE® ACS, Reag. Ph Eur	13746-66-2	K <sub>3</sub> [Fe(CN) <sub>6</sub> ]	329.25 g/mol	100 g	Plastic bottle	1.04973.0100
				250 g	Plastic bottle	1.04973.0250
				1 kg	Plastic bottle	1.04973.1000
				50 kg	Fibre carton	1.04973.9050
Potassium hexacyanoferrate(II) trihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	14459-95-1	K <sub>4</sub> [Fe(CN) <sub>6</sub> ] · 3 H <sub>2</sub> O	422.39 g/mol	100 g	Plastic bottle	1.04984.0100
				500 g	Plastic bottle	1.04984.0500
				50 kg	Fibre carton	1.04984.9050
Potassium hexahydroxoantimonate(V) cryst. for analysis EMSURE®	12208-13-8	K[Sb(OH) <sub>6</sub> ]	262.9 g/mol	100 g	Plastic bottle	1.05110.0100
Potassium hydrogen carbonate for analysis EMSURE® ACS	298-14-6	KHCO <sub>3</sub>	100.12 g/mol	500 g	Plastic bottle	1.04854.0500
Potassium hydrogen diiodate for analysis EMSURE®	13455-24-8	KH(IO <sub>3</sub> ) <sub>2</sub>	389.91 g/mol	50 g	Glass bottle	1.04867.0050
di-Potassium hydrogen phosphate anhydrous for analysis EMSURE®	7758-11-4	K <sub>2</sub> HPO <sub>4</sub>	174.18 g/mol	1 kg	Plastic bottle	1.05104.1000
				50 kg	Fibre carton	1.05104.9050
di-Potassium hydrogen phosphate trihydrate buffer substance for chromatography LiChropur®	16788-57-1	K <sub>2</sub> HPO <sub>4</sub> · 3 H <sub>2</sub> O	228.23 g/mol	250 g	Glass bottle	1.19754.0250
di-Potassium hydrogen phosphate trihydrate for analysis EMSURE®	16788-57-1	K <sub>2</sub> HPO <sub>4</sub> · 3 H <sub>2</sub> O	228.23 g/mol	250 g	Plastic bottle	1.05099.0250
				1 kg	Plastic bottle	1.05099.1000
				5 kg	Plastic bottle	1.05099.5000
				50 kg	Fibre carton	1.05099.9050
Potassium hydrogen phthalate for analysis EMSURE® Reag. Ph Eur	877-24-7	C <sub>8</sub> H <sub>5</sub> KO <sub>4</sub>	204.22 g/mol	250 g	Plastic bottle	1.04874.0250
				1 kg	Plastic bottle	1.04874.1000
Potassium hydrogen sulfate for analysis EMSURE® Reag. Ph Eur	7646-93-7	KHSO <sub>4</sub>	136.17 g/mol	500 g	Plastic bottle	1.04885.0500
				2.5 kg	Plastic bottle	1.04885.2500
Potassium iodate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7758-05-6	KIO <sub>3</sub>	214 g/mol	100 g	Plastic bottle	1.05051.0100
				500 g	Plastic bottle	1.05051.0500

## Salts P-R

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
P Potassium iodide for analysis EMSURE® ISO, Reag. Ph Eur	7681-11-0	KI	166.00 g/mol	250 g	Plastic bottle	1.05043.0250
				500 g	Plastic bottle	1.05043.0500
				1 kg	Plastic bottle	1.05043.1000
				2.5 kg	Plastic bottle	1.05043.2500
				50 kg	Fibre carton	1.05043.9050
Potassium nitrate for analysis EMSURE® ISO, Reag. Ph Eur	7757-79-1	KNO <sub>3</sub>	101.10 g/mol	500 g	Plastic bottle	1.05063.0500
				1 kg	Plastic bottle	1.05063.1000
				5 kg	Plastic bottle	1.05063.5000
				50 kg	Fibre carton	1.05063.9050
Potassium nitrite cryst. for analysis EMSURE® ACS	7758-09-0	KNO <sub>2</sub>	85.11 g/mol	250 g	Plastic bottle	1.05067.0250
				1 kg	Plastic bottle	1.05067.1000
di-Potassium oxalate monohydrate for analysis EMSURE® ACS	6487-48-5	K <sub>2</sub> C <sub>2</sub> O <sub>4</sub> · H <sub>2</sub> O	184.24 g/mol	250 g	Plastic bottle	1.05073.0250
				1 kg	Plastic bottle	1.05073.1000
Potassium perchlorate for analysis EMSURE® ACS	7778-74-7	KClO <sub>4</sub>	138.55 g/mol	250 g	Metal can	1.05076.0250
				1 kg	Metal can	1.05076.1000
Potassium permanganate for analysis EMSURE® ACS, Reag. Ph Eur	7722-64-7	KMnO <sub>4</sub>	158.03 g/mol	250 g	Glass bottle	1.05082.0250
				1 kg	Glass bottle	1.05082.1000
Potassium permanganate for analysis (max. 0.000005% Hg) EMSURE® ACS	7722-64-7	KMnO <sub>4</sub>	158.03 g/mol	1 kg	Glass bottle	1.05084.1000
Potassium peroxodisulfate for analysis (≤ 0.001% N) EMSURE® ACS, Reag. Ph Eur	7727-21-1	K <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	270.32 g/mol	250 g	Plastic bottle	1.05092.0250
Potassium peroxodisulfate for analysis EMSURE®	7727-21-1	K <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	270.32 g/mol	250 g	Plastic bottle	1.05091.0250
				1 kg	Plastic bottle	1.05091.1000
Potassium sodium tartrate tetrahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	6381-59-5	C <sub>4</sub> H <sub>4</sub> KNaO <sub>6</sub> · 4 H <sub>2</sub> O	282.23 g/mol	500 g	Plastic bottle	1.08087.0500
				1 kg	Plastic bottle	1.08087.1000
				5 kg	Plastic bottle	1.08087.5000
				50 kg	Fibre carton	1.08087.9050
Potassium sulfate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7778-80-5	K <sub>2</sub> SO <sub>4</sub>	174.26 g/mol	500 g	Plastic bottle	1.05153.0500
				1 kg	Plastic bottle	1.05153.1000
				5 kg	Plastic bottle	1.05153.5000
				25 kg	Fibre carton	1.05153.9025
Potassium sulfide small lumps for analysis EMSURE®	39365-88-3	-	-	250 g	Plastic bottle	1.05134.0250
				1 kg	Plastic bottle	1.05134.1000
Potassium thiocyanate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	333-20-0	KSCN	97.18 g/mol	250 g	Plastic bottle	1.05125.0250
				1 kg	Plastic bottle	1.05125.1000
				50 kg	Fibre carton	1.05125.9050

# Ordering information Salts | EMSURE®

## Salts S

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
S Silver nitrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7761-88-8	AgNO <sub>3</sub>	169.87 g/mol	25 g	Plastic bottle	1.01512.0025
				100 g	Plastic bottle	1.01512.0100
				250 g	Plastic bottle	1.01512.0250
				1 kg	Plastic bottle	1.01512.1000
Sodium acetate anhydrous for analysis EMSURE® ACS, Reag. Ph Eur	127-09-3	CH <sub>3</sub> COONa	82.03 g/mol	250 g	Plastic bottle	1.06268.0250
				1 kg	Plastic bottle	1.06268.1000
				2.5 kg	Plastic bottle	1.06268.2500
				50 kg	Fibre carton	1.06268.9050
Sodium acetate trihydrate for analysis indifferent to potassium permanganate EMSURE® ACS, ISO, Reag. Ph Eur	6131-90-4	NaCH <sub>3</sub> COO · 3 H <sub>2</sub> O	136.08 g/mol	500 g	Plastic bottle	1.06267.0500
				1 kg	Plastic bottle	1.06267.1000
				5 kg	Plastic bottle	1.06267.5000
				50 kg	Fibre carton	1.06267.9050
Sodium ammonium hydrogen phosphate tetrahydrate for analysis EMSURE®	7783-13-3	NaNH <sub>4</sub> HPO <sub>4</sub> · 4 H <sub>2</sub> O	209.07 g/mol	1 kg	Plastic bottle	1.06682.1000
Sodium carbonate anhydrous, for analysis EMSURE® ACS, ISO, Reag. Ph Eur	497-19-8	Na <sub>2</sub> CO <sub>3</sub>	105.99 g/mol	1 kg	Plastic bottle	1.06393.1000
				50 kg	Fibre carton	1.06393.9050
Sodium carbonate anhydrous for analysis EMSURE® ISO	497-19-8	Na <sub>2</sub> CO <sub>3</sub>	105.99 g/mol	500 g	Plastic bottle	1.06392.0500
				1 kg	Plastic bottle	1.06392.1000
				5 kg	Plastic bottle	1.06392.5000
				25 kg	Fibre carton	1.06392.9025
				50 kg	Fibre carton	1.06392.9050
Sodium carbonate decahydrate for analysis EMSURE® ISO, Reag. Ph Eur	6132-02-1	Na <sub>2</sub> CO <sub>3</sub> · 10 H <sub>2</sub> O	286.14 g/mol	1 kg	Plastic bottle	1.06391.1000
				5 kg	Plastic bottle	1.06391.5000
				25 kg	Fibre carton	1.06391.9025
				50 kg	Fibre carton	1.06404.9050
Sodium chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7647-14-5	NaCl	58.44 g/mol	500 g	Plastic bottle	1.06404.0500
				1 kg	Plastic bottle	1.06404.1000
				5 kg	Plastic bottle	1.06404.5000
				25 kg	Fibre carton	1.06404.9025
				50 kg	Fibre carton	1.06404.9050
tri-Sodium citrate dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	6132-04-3	C <sub>6</sub> H <sub>5</sub> Na <sub>3</sub> O <sub>7</sub> · 2 H <sub>2</sub> O	294.10 g/mol	500 g	Plastic bottle	1.06448.0500
				1 kg	Plastic bottle	1.06448.1000
				5 kg	Plastic bottle	1.06448.5000
				50 kg	Fibre carton	1.06448.9050
Sodium dichromate dihydrate for analysis EMSURE® ACS	7789-12-0	Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> · 2 H <sub>2</sub> O	298.00 g/mol	250 g	Plastic bottle	1.06336.0250
				1 kg	Plastic bottle	1.06336.1000
Sodium dihydrogen phosphate dihydrate for analysis EMSURE® Reag. Ph Eur	13472-35-0	NaH <sub>2</sub> PO <sub>4</sub> · 2 H <sub>2</sub> O	156.02 g/mol	250 g	Plastic bottle	1.06342.0250
				1 kg	Plastic bottle	1.06342.1000
				2.5 kg	Plastic bottle	1.06342.2500
				500 g	Plastic bottle	1.06346.0500
Sodium dihydrogen phosphate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	10049-21-5	NaH <sub>2</sub> PO <sub>4</sub> · H <sub>2</sub> O	137.99 g/mol	1 kg	Plastic bottle	1.06346.1000
				25 kg	Fibre carton	1.06346.9025
				50 kg	Fibre carton	1.06346.9050
				500 g	Plastic bottle	1.06591.0500
tetra-Sodium diphosphate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	13472-36-1	Na <sub>4</sub> P <sub>2</sub> O <sub>7</sub> · 10 H <sub>2</sub> O	446.06 g/mol	2.5 kg	Plastic bottle	1.06591.2500
				50 kg	Fibre carton	1.06591.9050

## Salts S

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
Sodium disulfite (sodium metabisulfite) for analysis EMSURE® ACS, Reag. Ph Eur	7681-57-4	$\text{Na}_2\text{S}_2\text{O}_5$	190.11 g/mol	100 g	Plastic bottle	1.06528.0100
				500 g	Plastic bottle	1.06528.0500
				1 kg	Plastic bottle	1.06528.1000
				5 kg	Plastic bottle	1.06528.5000
				50 kg	Fibre carton	1.06528.9050
Sodium dithionite for analysis	7775-14-6	$\text{Na}_2\text{S}_2\text{O}_4$	174.11 g/mol	500 g	Metal can	1.06507.0500
				2.5 kg	Metal can	1.06507.2500
Sodium fluoride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7681-49-4	NaF	41.98 g/mol	250 g	Plastic bottle	1.06449.0250
				1 kg	Plastic bottle	1.06449.1000
				50 kg	Fibre carton	1.06449.9050
Sodium formate for analysis EMSURE® ACS, Reag. Ph Eur	141-53-7	HCOONa	68.01 g/mol	500 g	Plastic bottle	1.06443.0500
				50 kg	Fibre carton	1.06443.9050
Sodium hexanitrocobaltate(III) [sodium cobalt(III)nitrite] for analysis EMSURE® ACS, Reag. Ph Eur	13600-98-1	$\text{Na}_3[\text{Co}(\text{NO}_2)_6]$	403.93 g/mol	25 g	Plastic bottle	1.02521.0025
				100 g	Plastic bottle	1.02521.0100
Sodium hydrogen carbonate for analysis EMSURE® ACS, Reag. Ph Eur	144-55-8	$\text{NaHCO}_3$	84.01 g/mol	500 g	Plastic bottle	1.06329.0500
				1 kg	Plastic bottle	1.06329.1000
				5 kg	Plastic bottle	1.06329.5000
				25 kg	Plastic drum	1.06329.9025
				50 kg	Fibre carton	1.06329.9050
di-Sodium hydrogen phosphate anhydrous for analysis EMSURE® ACS, Reag. Ph Eur	7558-79-4	$\text{Na}_2\text{HPO}_4$	141.96 g/mol	500 g	Plastic bottle	1.06586.0500
				1 kg	Plastic bottle	1.06586.1000
				2.5 kg	Plastic bottle	1.06586.2500
				50 kg	Fibre carton	1.06586.9050
				500 g	Plastic bottle	1.06559.0500
di-Sodium hydrogen phosphate anhydrous for analysis particle size about 0.2-1.0 mm (~ 18-80 mesh ASTM) EMSURE®	7558-79-4	$\text{Na}_2\text{HPO}_4$	141.96 g/mol	25 kg	Fibre carton	1.06559.9025
				500 g	Plastic bottle	1.19753.0250
di-Sodium hydrogen phosphate dihydrate buffer substance for chromatography LiChropur®	10028-24-7	$\text{Na}_2\text{HPO}_4 \cdot 2 \text{H}_2\text{O}$	177.99 g/mol	250 g	Glass bottle	1.19753.0250
				500 g	Plastic bottle	1.06580.0500
				1 kg	Plastic bottle	1.06580.1000
				5 kg	Plastic bottle	1.06580.5000
				25 kg	Fibre carton	1.06580.9025
di-Sodium hydrogen phosphate dodecahydrate for analysis EMSURE® ISO, Reag. Ph Eur	10039-32-4	$\text{Na}_2\text{HPO}_4 \cdot 12 \text{H}_2\text{O}$	358.14 g/mol	500 g	Plastic bottle	1.06579.0500
				1 kg	Plastic bottle	1.06579.1000
				5 kg	Plastic bottle	1.06579.5000
				25 kg	Fibre carton	1.06579.9025
				1 kg	Plastic bottle	1.06575.1000
di-Sodium hydrogen phosphate heptahydrate for analysis EMSURE® ACS	7782-85-6	$\text{Na}_2\text{HPO}_4 \cdot 7 \text{H}_2\text{O}$	268.03 g/mol	25 kg	Fibre carton	1.06575.9025
				500 g	Plastic bottle	1.06352.0500
Sodium hydrogen sulfate monohydrate for analysis EMSURE®	10034-88-5	$\text{NaHSO}_4 \cdot \text{H}_2\text{O}$	138.07 g/mol	100 g	Glass bottle	1.06525.0100
Sodium iodate for analysis EMSURE® Sodium iodide for analysis EMSURE® Reag. Ph Eur, ACS	7681-55-2	NaIO <sub>3</sub>	197.89 g/mol	100 g	Plastic bottle	1.06523.0100
				250 g	Plastic bottle	1.06523.0250
				1 kg	Plastic bottle	1.06523.1000

# Ordering information Salts | EMSURE®

## Salts S

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
Sodium metaperiodate for analysis EMSURE® ACS, Reag. Ph Eur	7790-28-5	NaIO <sub>4</sub>	213.89 g/mol	50 g	Plastic bottle	1.06597.0050
				250 g	Plastic bottle	1.06597.0250
				1 kg	Plastic bottle	1.06597.1000
Sodium molybdate dihydrate for analysis EMSURE®	10102-40-6	Na <sub>2</sub> MoO <sub>4</sub> · 2 H <sub>2</sub> O	241.95 g/mol	100 g	Plastic bottle	1.06521.0100
				250 g	Plastic bottle	1.06521.0250
				1 kg	Plastic bottle	1.06521.1000
Sodium nitrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7631-99-4	NaNO <sub>3</sub>	84.99 g/mol	500 g	Plastic bottle	1.06537.0500
				1 kg	Plastic bottle	1.06537.1000
				25 kg	Fibre carton	1.06537.9025
Sodium nitrite for analysis EMSURE® ACS, Reag. Ph Eur	7632-00-0	NaNO <sub>2</sub>	69.00 g/mol	100 g	Plastic bottle	1.06549.0100
				500 g	Plastic bottle	1.06549.0500
				1 kg	Plastic bottle	1.06557.1000
di-Sodium oxalate for analysis EMSURE®	62-76-0	Na <sub>2</sub> C <sub>2</sub> O <sub>4</sub>	134 g/mol	250 g	Plastic bottle	1.06557.0250
				1 kg	Plastic bottle	1.06557.1000
				25 kg	Steel drum	1.06564.9025
Sodium perchlorate monohydrate for analysis EMSURE®	7791-07-3	NaClO <sub>4</sub> · H <sub>2</sub> O	140.46 g/mol	100 g	Metal can	1.06564.0100
				500 g	Metal can	1.06564.0500
				25 kg	Steel drum	1.06564.9025
Sodium peroxidisulfate for analysis EMSURE®	7775-27-1	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	238.11 g/mol	500 g	Plastic bottle	1.06609.0500
				1 kg	Plastic bottle	1.06609.1000
				25 kg	Fibre carton	1.06609.9025
tri-Sodium phosphate dodecahydrate for analysis EMSURE®	10101-89-0	Na <sub>3</sub> PO <sub>4</sub> · 12 H <sub>2</sub> O	380.18 g/mol	1 kg	Plastic bottle	1.06572.1000
				5 kg	Plastic bottle	1.06572.5000
				25 kg	Fibre carton	1.06572.9025
tri-Sodium phosphate dodecahydrate for analysis EMSURE® ACS, Reag. Ph Eur	10101-89-0	Na <sub>3</sub> PO <sub>4</sub> · 12 H <sub>2</sub> O	380.18 g/mol	1 kg	Plastic bottle	1.06578.1000
				5 kg	Plastic bottle	1.06578.5000
				50 kg	Fibre carton	1.06578.9050
Sodium salicylate for analysis EMSURE®	54-21-7	C <sub>7</sub> H <sub>5</sub> NaO <sub>3</sub>	160.10 g/mol	250 g	Plastic bottle	1.06601.0250
				1 kg	Plastic bottle	1.06601.1000
				25 kg	Fibre carton	1.06637.9025
Sodium sulfate anhydrous, coarse granules for analysis 0.63–2.0 mm EMSURE® ACS	7757-82-6	Na <sub>2</sub> SO <sub>4</sub>	142.04 g/mol	500 g	Plastic bottle	1.06637.0500
				1 kg	Plastic bottle	1.06637.1000
				25 kg	Fibre carton	1.06637.9025
Sodium sulfate anhydrous for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7757-82-6	Na <sub>2</sub> SO <sub>4</sub>	142.04 g/mol	500 g	Plastic bottle	1.06649.0500
				1 kg	Plastic bottle	1.06649.1000
				5 kg	Plastic bottle	1.06649.5000
				25 kg	Fibre carton	1.06649.9025
Sodium sulfate anhydrous granulated for organic trace analysis EMSURE®	7757-82-6	Na <sub>2</sub> SO <sub>4</sub>	142.04 g/mol	500 g	Glass bottle	1.06639.0500
				1 kg	Plastic bottle	1.06648.1000
				25 kg	Fibre carton	1.06648.9025
Sodium sulfate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	7727-73-3	Na <sub>2</sub> SO <sub>4</sub> · 10 H <sub>2</sub> O	322.19 g/mol	1 kg	Plastic bottle	1.06648.1000
				5 kg	Fibre carton	1.06648.9025
				50 kg	Fibre carton	1.06648.9050
Sodium sulfite anhydrous for analysis EMSURE® Reag. Ph Eur	7757-83-7	Na <sub>2</sub> SO <sub>3</sub>	126.04 g/mol	500 g	Plastic bottle	1.06657.0500
				1 kg	Plastic bottle	1.06657.1000
				5 kg	Plastic bottle	1.06657.5000
				50 kg	Fibre carton	1.06657.9050
di-Sodium tartrate dihydrate for analysis EMSURE®	6106-24-7	C <sub>4</sub> H <sub>4</sub> Na <sub>2</sub> O <sub>6</sub> · 2 H <sub>2</sub> O	230.08 g/mol	250 g	Plastic bottle	1.06663.0250
				1 kg	Plastic bottle	1.06663.1000
				50 kg	Fibre carton	1.06663.9050
Sodium thiosulfate pentahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10102-17-7	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> · 5 H <sub>2</sub> O	248.21 g/mol	500 g	Plastic bottle	1.06516.0500
				1 kg	Plastic bottle	1.06516.1000
				5 kg	Plastic bottle	1.06516.5000
				50 kg	Fibre carton	1.06516.9050

## Salts S-Z

Product	CAS No.	Chemical formula	Molar weight	Content	Packaging	Order No.
Sodium tungstate dihydrate for analysis EMSURE®	10213-10-2	$\text{Na}_2\text{WO}_4 \cdot 2 \text{H}_2\text{O}$	329.86 g/mol	250 g	Plastic bottle	1.06673.0250
				1 kg	Plastic bottle	1.06673.1000
Strontium chloride hexahydrate for analysis EMSURE® ACS	10025-70-4	$\text{SrCl}_2 \cdot 6 \text{H}_2\text{O}$	266.62 g/mol	250 g	Plastic bottle	1.07865.0250
				1 kg	Plastic bottle	1.07865.1000
Strontium nitrate for analysis EMSURE®	10042-76-9	$\text{Sr}(\text{NO}_3)_2$	211.63 g/mol	250 g	Plastic bottle	1.07872.0250
Tin(II) chloride dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10025-69-1	$\text{SnCl}_2 \cdot 2 \text{H}_2\text{O}$	225.63 g/mol	100 g	Glass bottle	1.07815.0100
				250 g	Glass bottle	1.07815.0250
				1 kg	Glass bottle	1.07815.1000
Tin(II) chloride dihydrate for analysis (max. 0.000001% Hg) EMSURE®	10025-69-1	$\text{SnCl}_2 \cdot 2 \text{H}_2\text{O}$	225.63 g/mol	250 g	Glass bottle	1.07814.0250
				2.5 kg	Glass bottle	1.07814.2500
Tin(II) sulfate for analysis EMSURE®	7488-55-3	$\text{SnSO}_4$	214.77 g/mol	250 g	Plastic bottle	1.07823.0250
Zinc acetate dihydrate for analysis EMSURE® ACS	5970-45-6	$(\text{CH}_3\text{COO})_2\text{Zn} \cdot 2 \text{H}_2\text{O}$	219.49 g/mol	250 g	Plastic bottle	1.08802.0250
				1 kg	Plastic bottle	1.08802.1000
Zinc chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7646-85-7	$\text{ZnCl}_2$	136.30 g/mol	250 g	Plastic bottle	1.08816.0250
				1 kg	Plastic bottle	1.08816.1000
				25 kg	Plastic drum	1.08816.9025
Zinc iodide for analysis EMSURE®	10139-47-6	$\text{ZnI}_2$	319.18 g/mol	25 g	Glass bottle	1.08828.0025
				100 g	Glass bottle	1.08828.0100
Zinc nitrate tetrahydrate for analysis EMSURE®	19154-63-3	$\text{Zn}(\text{NO}_3)_2 \cdot 4 \text{H}_2\text{O}$	261.44 g/mol	1 kg	Plastic bottle	1.08833.1000
Zinc sulfate heptahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	7446-20-0	$\text{ZnSO}_4 \cdot 7 \text{H}_2\text{O}$	287.54 g/mol	500 g	Plastic bottle	1.08883.0500
				1 kg	Plastic bottle	1.08883.1000
				5 kg	Plastic bottle	1.08883.5000
				50 kg	Fibre carton	1.08883.9050



# Detailed information Salts | EMSURE®

## Salts A–H

	Product	Chemical formula
A	Aluminum ammonium sulfate dodecahydrate for analysis EMSURE®	$\text{NH}_4\text{Al}(\text{SO}_4)_2 \cdot 12 \text{ H}_2\text{O}$
	Aluminum nitrate nonahydrate for analysis EMSURE®	$\text{Al}(\text{NO}_3)_3 \cdot 9 \text{ H}_2\text{O}$
	Aluminum potassium sulfate dodecahydrate for analysis EMSURE® ACS	$\text{KAl}(\text{SO}_4)_2 \cdot 12 \text{ H}_2\text{O}$
	Ammonium acetate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{CH}_3\text{COONH}_4$
	Ammonium bromide for analysis EMSURE® ACS	$\text{NH}_4\text{Br}$
	Ammonium carbamate for analysis EMSURE®	$\text{H}_2\text{NCOONH}_4$
	Ammonium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{CH}_6\text{N}_2\text{O}_2 \cdot \text{CH}_5\text{NO}_3$
	Ammonium cerium(IV) nitrate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{NH}_4)_2[\text{Ce}(\text{NO}_3)_6]$
	Ammonium chloride for analysis EMSURE® ACS, ISO	$\text{NH}_4\text{Cl}$
	Ammonium dihydrogen phosphate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{NH}_4)_2\text{H}_2\text{PO}_4$
	Ammonium fluoride for analysis EMSURE® ACS	$\text{NH}_4\text{F}$
	Ammonium heptamolybdate tetrahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4 \text{ H}_2\text{O}$
	di-Ammonium hydrogen phosphate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{NH}_4)_2\text{HPO}_4$
	Ammonium iodide for analysis EMSURE® ACS	$\text{NH}_4\text{I}$
	Ammonium iron(III) sulfate dodecahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$(\text{NH}_4)\text{Fe}(\text{SO}_4)_2 \cdot 12 \text{ H}_2\text{O}$
	Ammonium iron(II) sulfate hexahydrate for analysis EMSURE®, ISO	$(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \cdot 6 \text{ H}_2\text{O}$
	Ammonium nitrate for analysis EMSURE® ACS, ISO	$\text{NH}_4\text{NO}_3$
	di-Ammonium oxalate monohydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$
	Ammonium peroxodisulfate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{NH}_4)_2\text{S}_2\text{O}_8$
	Ammonium sulfate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$(\text{NH}_4)_2\text{SO}_4$
	Ammonium thiocyanate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{NH}_4\text{SCN}$
B	Barium acetate for analysis EMSURE® ACS	$\text{Ba}(\text{CH}_3\text{COO})_2$
	Barium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{BaCO}_3$
	Barium chloride dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{BaCl}_2 \cdot 2 \text{ H}_2\text{O}$
	Barium hydroxide octahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{Ba}(\text{OH})_2 \cdot 8 \text{ H}_2\text{O}$
	Barium nitrate for analysis EMSURE® ACS	$\text{Ba}(\text{NO}_3)_2$
	Barium perchlorate anhydrous for analysis EMSURE®	$\text{Ba}(\text{ClO}_4)_2$
C	Cadmium sulfate hydrate for analysis EMSURE® ACS, Reag. Ph Eur	$3 \text{ CdSO}_4 \cdot 8 \text{ H}_2\text{O}$
	Calcium carbonate precipitated for analysis EMSURE®, Reag. Ph Eur	$\text{CaCO}_3$
	Calcium chloride dihydrate cryst. for analysis EMSURE® ACS, Reag. Ph Eur	$\text{CaCl}_2 \cdot 2 \text{ H}_2\text{O}$
	Calcium hydroxide for analysis EMSURE®, Reag. Ph Eur	$\text{Ca}(\text{OH})_2$
	Calcium nitrate tetrahydrate for analysis EMSURE® ACS	$\text{Ca}(\text{NO}_3)_2 \cdot 4 \text{ H}_2\text{O}$
	Calcium sulfate dihydrate precipitated for analysis EMSURE® ACS	$\text{CaSO}_4 \cdot 2 \text{ H}_2\text{O}$
	Cerium(II) sulfate tetrahydrate for analysis EMSURE®	$\text{Ce}(\text{SO}_4)_2 \cdot 4 \text{ H}_2\text{O}$
	Chromium(III) nitrate nonahydrate for analysis EMSURE®	$\text{Cr}(\text{NO}_3)_3 \cdot 9 \text{ H}_2\text{O}$
	Chromium(III) potassium sulfate dodecahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{KCr}(\text{SO}_4)_2 \cdot 12 \text{ H}_2\text{O}$
	Cobalt(II) acetate tetrahydrate for analysis EMSURE® ACS	$(\text{CH}_3\text{COO})_2\text{Co} \cdot 4 \text{ H}_2\text{O}$
	Cobalt(II) chloride hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{CoCl}_2 \cdot 6 \text{ H}_2\text{O}$
	Cobalt(II) nitrate hexahydrate for analysis EMSURE®	$\text{Co}(\text{NO}_3)_2 \cdot 6 \text{ H}_2\text{O}$
	Cobalt(II) nitrate hexahydrate for analysis EMSURE® (max. 0.001% Ni), ACS, Reag. Ph Eur	$\text{Co}(\text{NO}_3)_2 \cdot 6 \text{ H}_2\text{O}$
	Cobalt(II) sulfate heptahydrate for analysis EMSURE®	$\text{CoSO}_4 \cdot 7 \text{ H}_2\text{O}$
	Copper(II) acetate monohydrate for analysis EMSURE® ACS	$(\text{CH}_3\text{COO})_2\text{Cu} \cdot \text{H}_2\text{O}$
	Copper(I) chloride for analysis EMSURE® ACS	$\text{CuCl}$
	Copper(II) chloride dihydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{CuCl}_2 \cdot 2 \text{ H}_2\text{O}$
	Copper(II) nitrate trihydrate for analysis EMSURE®	$\text{Cu}(\text{NO}_3)_2 \cdot 3 \text{ H}_2\text{O}$
	Copper(II) sulfate anhydrous for analysis EMSURE®	$\text{CuSO}_4$
	Copper(II) sulfate pentahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{CuSO}_4 \cdot 5 \text{ H}_2\text{O}$

– means: no values available

Solubility [g/100 g H <sub>2</sub> O] at								Catalogue No.	Page
0°C	20°C	40°C	60°C	80°C	100°C	Percentage	Density		
2.6	6.6	12.4	21.1	35.2	109.2 (95°C)	6.2	1.0459 (15.5°C)	101031	70
61	75.4	89	108	—	—	43	—	101063	70
2.96	6.01	13.6	33.3	72	109.0 (90°C)	5.67	1.053	101047	70
148.0 (4°C)	—	—	—	—	—	—	—	101116	70
60.6	75.5	91.1	107.8	126.7	145.6	43.9	—	101125	70
—	78	—	—	—	—	—	—	101134	70 (68)
—	32.0	—	—	—	—	—	—	159504	70
—	141	—	—	—	—	—	—	102276	70
29.7	37.6	46	55.3	65.6	77.3	27.3	1.075	101145	70
22.7	36.8	56.7	82.9	120.7	174	26.9	—	101126	70
100	—	—	—	—	—	—	—	101164	70 (68)
—	40	—	—	—	—	—	—	101182	70
57.5	68.6	81.8	97.6	115.5	—	40.7	1.3436 (14.5°C)	101207	70
154.2	172.3	190.5	208.9	228.8	250.3	63.3	—	101173	70
—	124.0 (25°C)	—	—	—	—	—	—	103776	70 (68)
17.8	26.9	38.5	53.4	72	—	21.2	1.18	103792	71 (68)
118.5	187.7	283	415	610	1,000	65	1.308	101188	71
2.5	4.4	8	—	—	—	—	—	101192	71
58.2	—	—	—	—	—	—	—	101201	71 (68)
70.4	75.4	81.2	87.4	94.1	102	43	1.247	101217	71
115	163	235	347	—	—	62	—	101213	71
58	72	79	74	74	74	—	—	101704	71
—	0.002	—	—	—	—	—	—	101714	71
30.7	35.7	40.8	46.4	52.5	58.7	26.3	1.28	101719	71
1.5	3.5	8.2	21	—	—	3.4	1.04	101737	71
5	9.1	14.4	20.3	27.2	34.2	8.3	1.069	101729	71
—	198.5 (25°C)	—	—	—	—	—	—	101738	71
75.5	76.7	79.3	81.9	84.6	—	43.4	1.616	102027	71
—	0.0014	—	—	—	—	—	—	102066	71
—	—	128.1	136.8	147	159	—	—	102382	72
—	0.012 (18°C)	—	—	—	—	—	—	102047	72
101	129.4	196	—	—	—	56.4	—	102121	72
0.18	0.2	0.21	0.2	0.19	0.16	0.2	1.001	102161	72
—	—	3.8 (50°C)	—	—	—	—	—	102274	72
—	81	—	—	—	—	—	—	102481	72
—	25 (25°C)	—	—	—	—	—	—	101036	72
—	38	—	—	—	—	—	—	102529	72
41.9	53.6	69.5	—	—	—	38.4	1.49	102539	72
83.5	100	126	169.5	—	—	—	—	102536	72
—	0.2	—	—	—	—	—	—	102554	72
25.5	36.3	49.9	—	—	—	34.9	—	102556	72
—	7.2	—	—	—	—	—	—	102711	72
—	1.5 (25°C)	—	—	—	—	1.497 (25°C)	—	102739	72
70.6	77	83.8	91.2	99.2	107.9	43.5	1.55	102733	72
—	—	160	179	208	—	—	—	102753	72
25.5	36.2	48	60	70	83	—	—	102791	72
14.8	20.8	29	39.1	53.6	73.6	17.2	1.1965	102790	72

# Detailed information Salts | EMSURE®

## Salts I-P

	Product	Chemical formula
I	Iron(III) chloride hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{FeCl}_3 \cdot 6 \text{H}_2\text{O}$
	Iron(II) chloride tetrahydrate for analysis EMSURE®	$\text{FeCl}_2 \cdot 4 \text{H}_2\text{O}$
	Iron(II) sulfate heptahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$
L	Lead(II) acetate trihydrate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{CH}_3\text{COO})_2\text{Pb} \cdot 3 \text{H}_2\text{O}$
	Lead(II) nitrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{Pb}(\text{NO}_3)_2$
M	Lithium carbonate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{Li}_2\text{CO}_3$
	Lithium chloride for analysis EMSURE® ACS, Reag. Ph Eur	$\text{LiCl}$
M	Lithium sulfate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$
	Magnesium acetate tetrahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$(\text{CH}_3\text{COO})_2\text{Mg} \cdot 4 \text{H}_2\text{O}$
M	Magnesium chloride hexahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{MgCl}_2 \cdot 6 \text{H}_2\text{O}$
	Magnesium nitrate hexahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{Mg}(\text{NO}_3)_2 \cdot 6 \text{H}_2\text{O}$
M	Magnesium perchlorate hydrate [about 83% $\text{Mg}(\text{ClO}_4)_2$ ] for analysis EMSURE®	$\text{Mg}(\text{ClO}_4)_2 \cdot x \text{H}_2\text{O}$
	Magnesium sulfate anhydrous for analysis EMSURE®	$\text{MgSO}_4$
M	Magnesium sulfate heptahydrate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{MgSO}_4 \cdot 7 \text{H}_2\text{O}$
	Manganese(II) chloride dihydrate for analysis EMSURE®	$\text{MnCl}_2 \cdot 2 \text{H}_2\text{O}$
M	Manganese(II) chloride tetrahydrate for analysis EMSURE® ACS	$\text{MnCl}_2 \cdot 4 \text{H}_2\text{O}$
	Manganese(II) nitrate tetrahydrate for analysis EMSURE®	$\text{Mn}(\text{NO}_3)_2 \cdot 4 \text{H}_2\text{O}$
M	Manganese(II) sulfate tetrahydrate for analysis EMSURE®	$\text{MnSO}_4 \cdot 4 \text{H}_2\text{O}$
	Manganese(II) sulfate monohydrate spray-dried for analysis EMSURE® ACS, Reag. Ph Eur	$\text{MnSO}_4 \cdot \text{H}_2\text{O}$
M	Mercury(II) acetate for analysis EMSURE® ACS, Reag. Ph Eur	$\text{Hg}(\text{CH}_3\text{COO})_2$
	Mercury(II) bromide for analysis EMSURE® ACS, Reag. Ph Eur	$\text{HgBr}_2$
M	Mercury(II) chloride extra pure fine cryst.	$\text{HgCl}_2$
	Mercury(II) chloride for analysis EMSURE® ACS, Reag. Ph Eur	$\text{HgCl}_2$
M	Mercury(II) iodide red, for analysis EMSURE® ACS, Reag. Ph Eur	$\text{HgI}_2$
	Mercury(II) iodide red, extra pure	$\text{HgI}_2$
M	Mercury(I) nitrate dihydrate for analysis EMSURE®	$\text{Hg}_2(\text{NO}_3)_2 \cdot 2 \text{H}_2\text{O}$
	Mercury(II) sulfate extra pure	$\text{HgSO}_4$
M	Mercury(II) sulfate for analysis EMSURE® ACS	$\text{HgSO}_4$
	Mercury(II) thiocyanate for analysis EMSURE®, Reag. Ph Eur	$\text{Hg}(\text{SCN})_2$
N	Nickel(II) chloride hexahydrate for analysis EMSURE® ACS	$\text{NiCl}_2 \cdot 6 \text{H}_2\text{O}$
	Nickel(II) nitrate hexahydrate for analysis EMSURE® ACS	$\text{Ni}(\text{NO}_3)_2 \cdot 6 \text{H}_2\text{O}$
N	Nickel(II) sulfate hexahydrate for analysis EMSURE® ACS	$\text{NiSO}_4 \cdot 6 \text{H}_2\text{O}$
	Potassium bromate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{KBrO}_3$
P	Potassium bromide for analysis EMSURE® ACS, Reag. Ph Eur	$\text{KBr}$
	Potassium carbonate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{K}_2\text{CO}_3$
P	Potassium chlorate for analysis EMSURE®	$\text{KClO}_3$
	Potassium chloride for analysis EMSURE® (max. 0.005% Br), ACS, ISO, Reag. Ph Eur	$\text{KCl}$
P	Potassium chloride for analysis EMSURE®	$\text{KCl}$
	Potassium chromate for analysis EMSURE®	$\text{K}_2\text{CrO}_4$
P	Potassium cyanide for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{KCN}$
	Potassium dichromate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{K}_2\text{Cr}_2\text{O}_7$
P	Potassium dichromate for analysis EMSURE® (max. 0.000001% Hg) ACS, ISO	$\text{K}_2\text{Cr}_2\text{O}_7$
	Potassium dihydrogen phosphate for analysis EMSURE® (max. 0.005% Na) ACS, ISO, Reag. Ph Eur	$\text{KH}_2\text{PO}_4$
P	Potassium disulfite for analysis EMSURE®	$\text{K}_2\text{S}_2\text{O}_5$
	Potassium fluoride for analysis EMSURE® ACS	$\text{KF}$
P	Potassium hexacyanoferrate(III) for analysis EMSURE® ACS, Reag. Ph Eur	$\text{K}_3[\text{Fe}(\text{CN})_6]$
	Potassium hexacyanoferrate(II) trihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	$\text{K}_4[\text{Fe}(\text{CN})_6] \cdot 3 \text{H}_2\text{O}$

- means: no values available

	Solubility [g/100 g H <sub>2</sub> O] at						Saturated solution [20°C]		Catalogue No.	Page
	0°C	20°C	40°C	60°C	80°C	100°C	Percentage	Density		
83.5	100	126	169.5 (56°C)	—	—	—	50	—	103943	73 (68)
—	62.4	68.6	78.3	—	—	—	—	—	103861	73
15.6	26.6	40.3	47.6	—	—	—	21	1.225	103965	73 (68)
—	44.3	—	—	—	—	—	—	—	107375	73
36.4	52.2	69.4	88	107.5	127.3	—	34.3	1.4	107398	73
—	1.3	—	—	—	—	—	1.31	—	105680	73
—	—	—	—	—	133	—	—	—	105679	73
36.2	34.8	33.5	32.3	31.5	31	—	25.6	1.23	105694	73
—	120.0 (15°C)	—	—	—	—	—	—	—	105819	74
52.8	54.6	57.5	60.7	65.9	72.7	—	41.2	1.388 (25°C)	105833	74
63.9	70.5	81.8	93.7	110.9	—	—	—	—	105853	74
—	50.0 (25°C)	—	—	—	—	—	—	—	105874	74
—	30.0	—	—	—	—	—	—	—	106067	74
—	35.6	45.4	—	—	—	—	26.25	1.31	105886	74
—	—	—	108.6	110.5	115	—	—	—	105934	74
63.6	73.6	88.7	106.0 (58.1°C)	—	—	—	42.4	1.499	105927	74 (68)
—	380.0	—	—	—	—	—	—	—	105940	74
63.4 (15°C)	65.2 (25°C)	70.7 (45°C)	—	—	—	—	—	—	105941	74
—	—	60	58.6	45.5	35.5	—	—	—	102786	74 (68)
—	40.0	—	—	—	—	—	—	—	104410	74
—	0.6 (25°C)	1	1.7	2.8	4.9	0.62 (25°C)	—	—	104421	74
4.3	6.6	9.6	13.9	24.2	54.1	—	6.2	1.052	104417	74
4.3	6.6	9.6	13.9	24.2	54.1	—	6.2	1.052	104419	74
—	0.005 (25°C)	—	—	—	—	—	—	—	104428	74
—	0.005 (25°C)	—	—	—	—	—	—	—	104420	75
—	2.0	—	—	—	—	—	—	—	104437	75
—	0.04 (25°C)	—	—	—	—	—	—	—	104481	75
—	0.04 (25°C)	—	—	—	—	—	—	—	104480	75
—	0.07 (25°C)	—	—	—	—	—	—	—	104484	75
51.7	55.3	—	—	—	—	—	35.6	1.46	106717	75
79.2	94.1	118.8	—	—	—	—	48.5	—	106721	75
—	—	—	57	—	—	—	—	—	106727	75
3.1	6.8	13.1	22	33.9	49.7	—	6.4	1.048	104912	75
54	65.8	76.1	85.9	95.3	104.9	—	39.7	1.37	104905	75
105.5	111.5	117	127	140	156	—	—	—	104928	75
3.3	7.3	14.5	25.9	39.7	56.2	—	6.8	1.042	104944	75
28.1	34.2	40.3	45.6	51	56.2	—	25.5	1.174	104933	75
—	34.7	—	—	—	—	—	—	—	104936	75
59	63.7	67	70.9	75.1	79.2	—	38.9	1.378	104952	75
63	71.6	—	81	95	122	—	41.73	—	104967	75
4.7	12.5	26.3	45.6	73	103	—	11.1	1.077	104864	75
—	13.0	—	—	—	—	—	—	—	104865	76
14.3	22.7	33.9	48.6	68	—	—	18.5	—	104877	76
27.5	44.9	63.9	85	108	133	—	30.99	—	105057	76
15.0	28.9	—	—	—	—	—	—	—	104994	76
29.9	46	59.5	70.9	81.8	91.6	—	31.5	1.18	104973	76
15	28.9	42.7	56	68.9	82.7	—	22.4	1.16	104984	76

# Detailed information Salts | EMSURE®

## Salts P-S

	Product	Chemical formula
P	Potassium hexahydroantimonate(V) cryst. for analysis EMSURE®	K[Sb(OH) <sub>6</sub> ]
	Potassium hydrogen carbonate for analysis EMSURE® ACS	KHCO <sub>3</sub>
	Potassium hydrogen diiodate for analysis EMSURE®	KH(IO <sub>3</sub> ) <sub>2</sub>
	di-Potassium hydrogen phosphate anhydrous for analysis EMSURE®	K <sub>2</sub> HPO <sub>4</sub>
	di-Potassium hydrogen phosphate trihydrate for analysis EMSURE®	K <sub>2</sub> HPO <sub>4</sub> · 3 H <sub>2</sub> O
	Potassium hydrogen phthalate for analysis EMSURE® Reag. Ph Eur	C <sub>8</sub> H <sub>5</sub> KO <sub>4</sub>
	Potassium hydrogen sulfate for analysis EMSURE® Reag. Ph Eur	KHSO <sub>4</sub>
	Potassium iodate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	KIO <sub>3</sub>
	Potassium iodide for analysis EMSURE® ACS, ISO, Reag. Ph Eur	KI
	Potassium nitrate for analysis EMSURE® ISO, Reag. Ph Eur	KNO <sub>3</sub>
	Potassium nitrite cryst. for analysis EMSURE® ACS	KNO <sub>2</sub>
	di-Potassium oxalate monohydrate for analysis EMSURE® ACS	K <sub>2</sub> C <sub>2</sub> O <sub>4</sub> · H <sub>2</sub> O
	Potassium perchlorate for analysis EMSURE® ACS	KClO <sub>4</sub>
	Potassium permanganate for analysis EMSURE® ACS, Reag. Ph Eur	KMnO <sub>4</sub>
	Potassium permanganate for analysis EMSURE® (max. 0.000005% Hg) ACS	KMnO <sub>4</sub>
	Potassium peroxodisulfate for analysis EMSURE® (max. 0.001% N), ACS, Reag. Ph Eur	K <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
	Potassium peroxodisulfate for analysis EMSURE® ACS, Reag. Ph Eur	K <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
	Potassium sodium tartrate tetrahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	C <sub>4</sub> H <sub>4</sub> KNaO <sub>6</sub> · 4 H <sub>2</sub> O
	Potassium sulfate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	K <sub>2</sub> SO <sub>4</sub>
	Potassium sulfide about 44% small lumps, for analysis EMSURE®	-
	Potassium thiocyanate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	KSCN
S	Silver nitrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	AgNO <sub>3</sub>
	Sodium acetate anhydrous for analysis EMSURE® ACS, Reag. Ph Eur	CH <sub>3</sub> COONa
	Sodium acetate trihydrate for analysis EMSURE® indifferent to potassium permanganate ACS, ISO, Reag. Ph Eur	NaCH <sub>3</sub> COO · 3 H <sub>2</sub> O
	Sodium ammonium hydrogen phosphate tetrahydrate for analysis EMSURE®	NaNH <sub>4</sub> HPO <sub>4</sub> · 4 H <sub>2</sub> O
	Sodium carbonate anhydrous for analysis EMSURE® ACS, ISO, Reag. Ph Eur	Na <sub>2</sub> CO <sub>3</sub>
	Sodium carbonate anhydrous for analysis EMSURE®, ISO	Na <sub>2</sub> CO <sub>3</sub>
	Sodium carbonate decahydrate for analysis EMSURE®, ISO, Reag. Ph Eur	Na <sub>2</sub> CO <sub>3</sub> · 10 H <sub>2</sub> O
	Sodium chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	NaCl
	tri-Sodium citrate dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	C <sub>6</sub> H <sub>5</sub> Na <sub>3</sub> O <sub>7</sub> · 2 H <sub>2</sub> O
	Sodium dichromate dihydrate for analysis EMSURE® ACS	Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> · 2 H <sub>2</sub> O
	Sodium dihydrogen phosphate dihydrate for analysis EMSURE® Reag. Ph Eur	NaH <sub>2</sub> PO <sub>4</sub> · 2 H <sub>2</sub> O
	Sodium dihydrogen phosphate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	NaH <sub>2</sub> PO <sub>4</sub> · H <sub>2</sub> O
	tetra-Sodium diphosphate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>4</sub> P <sub>2</sub> O <sub>7</sub> · 10 H <sub>2</sub> O
	Sodium disulfite (sodium metabisulfite) for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>
	Sodium dithionite for analysis	Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>
	Sodium fluoride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	NaF
	Sodium formate for analysis EMSURE® ACS, Reag. Ph Eur	HCOONa
	Sodium hexanitrocobaltate(III) [sodium cobalt(III)nitrite] for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>3</sub> [Co(NO <sub>2</sub> ) <sub>6</sub> ]
	Sodium hydrogen carbonate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	NaHCO <sub>3</sub>
	di-Sodium hydrogen phosphate anhydrous for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>2</sub> HPO <sub>4</sub>
	di-Sodium hydrogen phosphate anhydrous for analysis EMSURE®, particle size about 0.2–1.0 mm (~ 18–80 mesh ASTM)	Na <sub>2</sub> HPO <sub>4</sub>
	di-Sodium hydrogen phosphate dihydrate for analysis EMSURE®	Na <sub>2</sub> HPO <sub>4</sub> · 2 H <sub>2</sub> O
	di-Sodium hydrogen phosphate dodecahydrate for analysis EMSURE® ISO, Reag. Ph Eur	Na <sub>2</sub> HPO <sub>4</sub> · 12 H <sub>2</sub> O
	di-Sodium hydrogen phosphate heptahydrate for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>2</sub> HPO <sub>4</sub> · 7 H <sub>2</sub> O
	Sodium hydrogen sulfate monohydrate for analysis EMSURE®	NaHSO <sub>4</sub> · H <sub>2</sub> O
	Sodium iodate for analysis EMSURE®	NaIO <sub>3</sub>

- means: no values available

Solubility [g/100 g H <sub>2</sub> O] at	Saturated solution [20°C]						Catalogue No.	Page		
	0°C	20°C	40°C	60°C	80°C	100°C	Percentage	Density		
-	2.0	-	-	-	-	-	-	-	105110	76
22.6	33.3	45.3	60	-	-	-	24.98	1.18	104854	76
-	1.3	-	-	-	-	-	-	-	104867	76
-	-	-	266	-	-	-	-	-	105104	76
-	159	212.5	-	-	-	-	61.4	-	105099	76
-	8.0	-	-	-	-	-	-	-	104874	76
36.3	51.4	76.3	-	-	121.6	33.95	-	-	104885	76
4.7	8.1	12.9	18.5	24.8	32.3	7.5	1.064	-	105051	76
127.8	144.5	161	176.2	191.5	208	59.1	1.71	-	105043	77
13.3	31.7	63.9	109.9	169	245.2	24.1	1.16	-	105063	77
278.8	298.4	334.9	-	-	412.8	-	-	-	105067	77
-	36.0	-	-	-	-	-	-	-	105073	77
0.76	1.7	3.6	7.2	13.4	22.2	1.7	1.008	-	105076	77
2.8	6.4	12.6	22.4	-	-	6	1.04	-	105082	77
-	6.4	-	-	-	-	6	1.04	-	105084	77
-	0.5	1.1	-	-	-	0.468	-	-	105092	77
0.18	0.5	1.1	-	-	-	0.468	-	-	105091	77
-	63.0	-	-	-	-	-	-	-	108087	77
7.3	11.1	14.8	18.2	21.3	24.1	10	1.0807	-	105153	77
-	50.0	-	-	-	-	-	-	-	105134	77
177	218	-	-	-	-	68.55	1.42	-	105125	77
115	219.2	334.8	471	652	1,024	68.6	2.18	-	101512	78
-	36.5	-	-	-	-	-	-	-	106268	78
36.3	46.4	65.4	138.0 (58°C)	-	-	31.7	1.17	-	106267	78
-	16.7	-	-	-	-	-	-	-	106682	78
7.1	21.4	48.5	46.5	45.8	45.5	-	-	-	106393	78
-	22.0	-	-	-	-	-	-	-	106392	78
6.9	21.7	-	-	-	-	17.8	1.1941	-	106391	78 (68)
-	35.9	36.4	37.1	38.1	39.2	26.4	1.201	-	106404	78
-	72.0	-	-	-	-	-	-	-	106448	78
163.2	180.2	220.5	283	385	-	64.3	-	-	106336	78
-	85.0	-	-	-	-	-	-	-	106342	78
-	-	158.6 (50°C)	-	-	-	-	-	-	106346	78
2.7	5.5	12.5	21.9	30	40.3	5.2	1.05	-	106591	78
-	65.3	71.1	79.9	88.7	100	39.5	-	-	106528	79
-	25.0	-	-	-	-	-	-	-	106507	79
3.6	4.1	-	-	-	-	3.94	1.04	-	106449	79
43.8	85.3	107	131	198	150	-	-	-	106443	79
-	72.0	-	-	-	-	-	-	-	102521	79
6.9	9.6	12.7	16	19.7	23.6	8.76	1.08	-	106329	79
-	-	-	-	-	104.1	-	-	-	106586	79
-	7.7	-	-	-	-	-	-	-	106559	79 (68)
-	-	-	83	92.4	-	-	-	-	106580	79
1.63	7.7	-	-	-	-	7.2	1.08	-	106579	79 (68)
-	-	55	-	-	-	-	-	-	106575	79 (68)
-	108.0	-	-	-	-	-	-	-	106352	79
2.5	9.1	-	23	27	32.8	-	-	-	106525	79

# Detailed information Salts | EMSURE®

## Salts S-Z

	Product	Chemical formula
S	Sodium iodide for analysis, Reag. Ph Eur	NaI
	Sodium metaperiodate for analysis EMSURE® ACS, Reag. Ph Eur	NaIO <sub>4</sub>
	Sodium molybdate dihydrate for analysis EMSURE®	Na <sub>2</sub> MoO <sub>4</sub> · 2 H <sub>2</sub> O
	Sodium nitrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	NaNO <sub>3</sub>
	Sodium nitrite for analysis EMSURE® ACS, Reag. Ph Eur	NaNO <sub>2</sub>
	di-Sodium oxalate for analysis EMSURE®	NaOOCCOONa
	Sodium perchlorate monohydrate for analysis EMSURE®	NaClO <sub>4</sub> · H <sub>2</sub> O
	Sodium peroxydisulfate for analysis EMSURE®	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
	tri-Sodium phosphate dodecahydrate for analysis EMSURE®	Na <sub>3</sub> PO <sub>4</sub> · 12 H <sub>2</sub> O
	tri-Sodium phosphate dodecahydrate for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>3</sub> PO <sub>4</sub> · 12 H <sub>2</sub> O
	Sodium salicylate for analysis EMSURE®	C <sub>7</sub> H <sub>5</sub> NaO <sub>3</sub>
	Sodium sulfate anhydrous for analysis EMSURE® ACS, ISO, Reag. Ph Eur	Na <sub>2</sub> SO <sub>4</sub>
	Sodium sulfate decahydrate for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>2</sub> SO <sub>4</sub> · 10 H <sub>2</sub> O
	Sodium sulfite anhydrous for analysis EMSURE® ACS, Reag. Ph Eur	Na <sub>2</sub> SO <sub>3</sub>
	di-Sodium tartrate dihydrate for analysis EMSURE®	C <sub>4</sub> H <sub>4</sub> Na <sub>2</sub> O <sub>6</sub> · 2 H <sub>2</sub> O
	Sodium thiosulfate pentahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> · 5 H <sub>2</sub> O
	Sodium tungstate dihydrate for analysis EMSURE®	Na <sub>2</sub> WO <sub>4</sub> · 2 H <sub>2</sub> O
	Strontium chloride hexahydrate for analysis EMSURE® ACS, ISO	SrCl <sub>2</sub> · 6 H <sub>2</sub> O
	Strontium nitrate for analysis EMSURE®	Sr(NO <sub>3</sub> ) <sub>2</sub>
T	Tin(II) chloride dihydrate for analysis EMSURE® ACS, Reag. Ph Eur	SnCl <sub>2</sub> · 2 H <sub>2</sub> O
	Tin(II) chloride dihydrate for analysis EMSURE® (max. 0.000001% Hg)	SnCl <sub>2</sub> · 2 H <sub>2</sub> O
Z	Zinc acetate dihydrate for analysis EMSURE® ACS	(CH <sub>3</sub> COO) <sub>2</sub> Zn · 2 H <sub>2</sub> O
	Zinc chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	ZnCl <sub>2</sub>
	Zinc iodide for analysis EMSURE®	ZnI <sub>2</sub>
	Zinc nitrate tetrahydrate for analysis EMSURE®	Zn(NO <sub>3</sub> ) <sub>2</sub> · 4 H <sub>2</sub> O
	Zinc sulfate heptahydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	ZnSO <sub>4</sub> · 7 H <sub>2</sub> O

— means: no values available



Solubility [g/100 g H <sub>2</sub> O] at						Saturated solution [20°C]		Catalogue No.	Page
0°C	20°C	40°C	60°C	80°C	100°C	Percentage	Density		
-	-	-	-	295	303	-	-	106523	79
-	9.1	-	-	-	-	-	-	106597	80
-	84.0	-	-	-	-	-	-	106521	80
70.7	88.3	104.9	124.7	148	176	46.8	1.38	106537	80
73	84.5	95.7	112.3	135.5	163	45.8	1.33	106549	80
-	3.7	-	-	-	-	-	-	106557	80
167	181	243	-	-	-	64.4	1.757	106564	80
-	54.5	-	-	-	-	-	-	106609	80 (68)
-	28.5	-	-	-	-	-	-	106572	80
1.5	12.1	31	55	81	108	10.8	1.106	106578	80
-	100	-	-	-	-	-	-	106601	80
-	-	48.1	45.3	43.1	42.3	-	-	106649	80
4.56	19.2	-	-	-	-	16.1	1.15	106648	80 (68)
-	-	37	33.2	29	26.6	-	-	106657	80
(29)	29.0	-	-	-	-	-	-	106663	80
52.5	70.1	102.6	-	-	-	41.2	1.39	106516	80
-	73	73.9	-	90.2	96.9	-	-	106673	81
44.1	53.8	66.6	85.2	-	-	35	1.39	107865	81
-	-	91.2	94.2	97.2	101.2	-	-	107872	81
83.9	269.8 (15°C)	-	-	-	-	-	-	107815	81 (68)
-	118.7	-	-	-	-	-	-	107814	81 (68)
-	43	-	-	-	-	-	-	108802	81
-	-	453	488	541	-	-	-	108816	81
429.4	-	445.2	467.2	490	510.5	-	-	108828	81
-	-	211.5	-	-	-	-	-	108833	81
41.6	53.8	-	-	-	-	35	1.47	108883	81

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