

Eka Facts

Eka SC Aqueous

Sodium Chlorate solution

General

Eka SC Aqueous is a sodium chlorate water solution that is a clear, colorless to slightly yellow liquid.

Typical properties

NaClO ₃ (60°C/140°F)	39.0 - 49.9 wt. %
NaClO ₃	500 - 700 g/l
Cr	≤ 8 ppm

Other characteristics

Chemical formula	NaClO ₃
Appearance	Light yellow liquid
Odor	No odor
Density	1297-1408 kg/m ³
Viscosity (35°C/95°F)	1.83 cP
Molecular weight	106.45
CAS number	7775-09-9

Eka SC Aqueous will begin to recrystallize if the temperature drops below 25°C / 80°F.

Applications

Eka SC Aqueous (sodium chlorate) is essential to environmentally compatible paper pulp bleaching.

It is the functional ingredient in the generation of chlorine dioxide, which, in turn, is the main component in ECF (Elemental Chlorine-Free) bleaching. Up to 95 percent of all sodium chlorate produced worldwide is consumed by the pulp industry.

Its second most common use is by the chemical industry where it is used as a precursor in the production of sodium and ammonium perchlorate and sodium chlorite. Sodium chlorate and sodium chlorite are the common precursors to chlorine dioxide, which is used in many water treatment applications.

Other common industrial applications for sodium chlorate include as an oxidant in the mining industry for the extraction of uranium and vanadium; in the automotive industry as a surface treatment for metals; it is also used in the Printed Circuit Board industry for the control and replenishment of the cupric chloride etchant.

This versatile chemical is utilized in many devices that require an oxygen source (e.g. breathing apparatus).

Safety

Please refer to the current SDS (Safety Data Sheet) for preventive protection and first aid response.

Eka SC Aqueous is classified as dangerous goods. It is a strong oxidizing agent and is very soluble in water and alcohol.

Eka SC Aqueous is stable over time, but evaporation of water from the solution will increase the concentration.

Dried and crystalized sodium chlorate is stable at temperatures up to 250°C (482°F). Above this temperature chlorate decomposes and oxygen is liberated.

Be aware that sodium chlorate in liquid form is a hazard as well. Sodium chlorate solution is a clear odorless liquid that may become invisible when it dries on any organic material like cloth, leather, paper or wood. All that is required is a spark, minor friction or heat, to ignite. Sodium chlorate in its pure form is not flammable; however, due to the fact it releases oxygen during decomposition, it will act as an extreme combustion accelerant in the presence of flammable materials.

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Mandatory protective equipment

Because sodium chlorate should never come in contact with organic materials like cloth and leather; make sure, as a minimum, all personnel handling Eka SC Aqueous are provided with, and required to wear, the following items:

- A protective suit (preferred anti flammable treated) made of vinyl, neoprene, or PVC.
- A pair of vinyl or neoprene boots.
- Protective goggles that fit snugly over the eyes.
- Vinyl or neoprene gloves.
- A hard-hat with a full-face shield.

Additional information on the handling of Eka SC Aqueous is available in the Sodium Chlorate Product Information Manual that can be obtained from your Nouryon representative.

Shipping

Eka SC Aqueous is shipped in bulk tanks.

Eka SC is classified as hazardous material and consequently transportation and packaging design must adhere to the all applicable transportation regulations.

Transportation may take place by road, railway, air or sea. Each mode of transport demands specific regulations with special requirements regarding packaging, vehicle and documentation.

Proper Shipping Name	Sodium Chlorate, aqueous solution
UN number	2428
Transportation Hazard Class	5.1
Packaging group	II

Quality

Production at all Nouryon sites is in accordance with certified management systems. To receive a copy of the current certificate(s) please contact your Nouryon representative.

Customer Service

Nouryon representatives will be pleased to discuss in detail the safe handling, application and benefits of Eka SC Aqueous.

To arrange your personal interview, please contact your Nouryon account representative, email bleaching_experts@nouryon.com or call one of the numbers below.

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