

Sulphur Products



SULPHURIC ACID (H_2SO_4 , 93-98 %) is the most widely used chemical in the world. It is a viscous, colourless, clear liquid that reacts violently with even insignificant quantities of water in a strongly exothermic reaction.

Sulphuric acid is a by-product of the smelting process. Boliden is one of the major producers of sulphuric acid in the smelting industry. With a total production of 1,7 million tonnes annually at Rönnskär, Harjavalta, Kokkola and Odda, we can guarantee a very high delivery reliability. The sulphuric acid produced in Harjavalta and Rönnskär is of highest quality in the smelting industry. Sulphuric acid is used in the production of fertilizers and chemicals as well as the pulp and paper industry and mining.

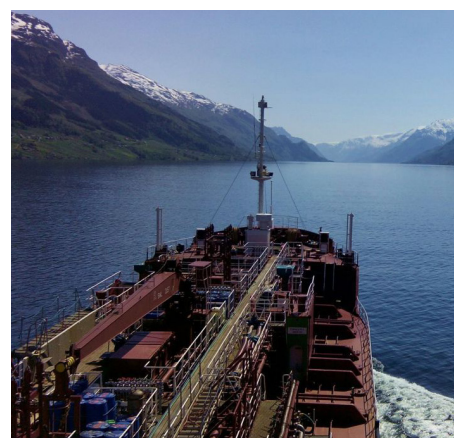
Liquid sulphur dioxide is a colourless liquid, which is stored under pressure or

cooled below the boiling point. It is also used within the paper and pulp industry and is produced in Rönnskär and Harjavalta.

OUR PROMISE

Boliden's experienced technical support drives the development and production process of the Sulphur Products and our Technical Consultant is ready to answer your questions with regards to storage and safe handling of the products. Through reliable deliveries, high quality products and professional customer service, including price information and technical support we want to be your supplier of choice.

By becoming Boliden's customer, we want to help you add value to your customers and work with you for a more sustainable future.



Did you know that ...

Copper smelters produce approximately one ton of sulphuric acid per one ton of copper concentrate.

Specification Sulphuric Acid

Chemical composition	High grade	Technical grade
H ₂ SO ₄	92 - 98.5%	92 - 98.5%
Cr	< 1,0 ppm	< 1 ppm
Ni	< 0.7 ppm	< 1 ppm
Mn	< 0.3 ppm	< 1 ppm
SO ₂	< 15 ppm	< 15 ppm
Cl	< 1 ppm	< 1 ppm
As	< 0.2 ppm	< 1 ppm
Cu	< 0,1 ppm	< 0,1 ppm
Cd	< 0,01 ppm	< 0,01 ppm
Pb	< 0,1 ppm	< 0,1 ppm
Zn	< 0,1 ppm	< 1 ppm
Hg	< 0,08 ppm	< 0,3 ppm



Physical property (95% concentration)	Unit	Value
Density	kg/dm ³	1.84
Boiling point	°C	290
Freezing point	°C	- 25

Specification Liquid Sulphur Dioxide

Rönnskär			Harjavalta		
SO ₂	min	99,9 %	SO ₂	min	99,8%
H ₂ O	max	50 ppm	H ₂ O	max	100 ppm
H ₂ SO ₄	max	5 ppm	H ₂ SO ₄	max	100 ppm

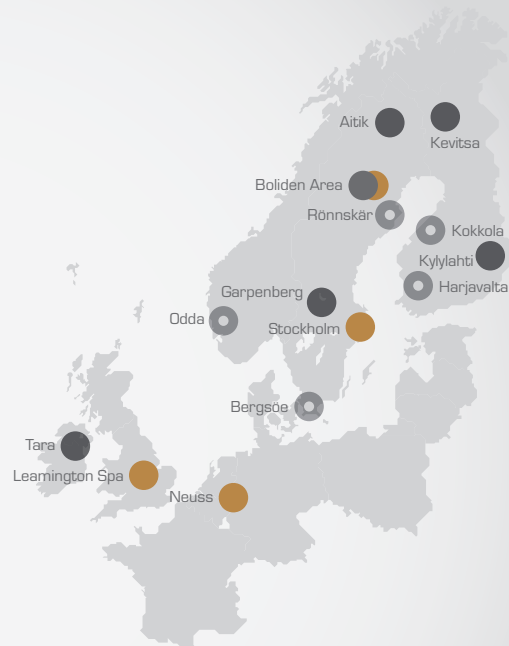
Physical property	Unit	Value
Density (at 20 °C)	kg/dm ³	1.38
Boiling point	°C	-10
Solidification point	°C	-75
Critical temperature	°C	157,1

The Boliden Group

Metals are an ever-present and vital component of society. Boliden extracts minerals and produces high quality metals in a cost-efficient way. The work – from exploration to customer delivery – is characterised by care for people, the environment and society.

The Boliden Group operates six mines and five smelters in Sweden, Finland, Norway and Ireland and has a total of approximately 5,700 employees. Our core expertise is in exploration, mining, smelting and recycling.

Boliden's main metals are zinc and copper, but the production of lead, nickel, gold, silver and other products is also of considerable importance for our profitability. The annual turnover is approximately SEK 50 billion.



Our value chain

Exploration Successful exploration is vital to long-term metal production. The exploration is conducted in the vicinity of existing mines and in new areas in order to find new deposits.

Mines Zinc-, copper-, nickel-, lead-, gold- and silver-bearing ores are mined in Boliden's mining areas. The ore is processed to metal concentrate, the majority of which is delivered to smelters within the Group.

Smelters Boliden's smelters refine metal concentrates and other raw materials, such as electronic scrap, to produce both pure metals and customised alloys.

Customers Our products are mainly sold to industrial customers in Europe. Most of the zinc is sold to steel companies, while the copper is supplied to manufacturers of for example wire rod.