



SULFURIC ACID, INDUSTRIAL GRADE, AND OLEUM (FUMING SULFURIC ACID)

CAS 7664-93-9 (Sulfuric Acid)
CAS 8014-95-7 (Oleum)

ES Number: 231-639-5

CHARACTERISTICS

Sulfuric acid, industrial grade, is an aqueous solution of sulfuric acid, while oleum (fuming sulfuric acid) is a solution of sulphur trioxide (SO₃) in sulfuric acid. Sulfuric acid, industrial grade, is produced by the contact process from elementary sulphur.

Sulfuric acid, industrial grade, is an oily colourless to slightly clouded liquid, well miscible with water. It is a hygroscopic liquid with strongly acid reactions and corrosive effects; it carbonizes a major part of organic substances. In contact with water, it is diluted under considerable heat generation. It is therefore necessary to add the acid into water and not the other way round. At temperatures lower than 10 °C there is a danger of solidification of concentrated sulfuric acid.

Oleum is an oily liquid, more or less coloured or clouded due to the presence of contained impurities. On air, it generates strong fumes. In contact with water, it is diluted under considerable heat generation. Depending on the content of SO₃, its crystallization temperature is in the range from + 4 °C to + 17 °C.

Permissible applications of sulfuric acid are set out in the relevant MSDS (Material Safety Data Sheet).

The classification of sulfuric acid, industrial grade, and oleum, is prepared according to Act No. 350/2011 Coll., on Chemical Substances and Mixtures, Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and CLP-Regulation (EC) No 1272/2008, including their implementation rules, as amended, and, as applicable, other legal regulations that may supersede them in the future and the classification is set out in the relevant MSDS (Material Safety Data Sheet).

At work and during any handling with these products it is absolutely necessary to follow the relevant regulations concerning occupational health and safety – they are set out in Chapter VI of the relevant standard and in the relevant MSDS (Material Safety Data Sheet).

The products are produced according to the currently valid process, fire safety, and occupational safety documentation.

SPECIFICATION

Quality parameter	Unit	Sulfuric acid, industrial grade, guaranteed value	Oleum, guaranteed value	Test method
Sulfuric acid content (H ₂ SO ₄)	% wt	94.0 – 96.5	105.6 – 107.2	SOP-A-172
Free sulphur trioxide content (SO ₃)	% wt	–	25 – 32	SOP-A-172
Color (Hazen), max.	H	40	–	SOP-A-172
Turbidity at 560 nm, max.	ZF	20	–	SOP-A-172
Iron (Fe) content, max.	% wt	0.005	0.06	SOP-A-172
Appearance				SOP-A-172