Sulphophthalic Acid 50 %

An electrolyte for the integral colour anodizing of aluminium.

Sulphophthalic acid 50 % is used on a large scale in anodic integral colouring processes.

The distinctive feature of these processes is that the colour is produced in the oxide film itself as it is formed on the metal. The colour is due to elementary inclusion of the components of the alloy (e.g. Si, Mn, Cu or Cr) in the coating and to the use of special electrolytes.

The function of **Sulphophthalic acid** is to regulate the current potential characteristic and the redissolving power of oxide layer.

The colours produced by this anodic process are outstandingly resistant to light and weathering.

1. Properties

Commercial Form :	odourless liquid of low viscosity and pale reddih to brownish colour.
Chemical character :	sulphophthalic acid (a mixture of the isomers of 3- and 4-sulphophthalic acid) in aqueous solution ; anionic
Density at 20 ℃ :	1 270 kg/m ^{3}
pH values 10g/l at 20 ℃ :	~ 2
Boiling point :	app. 100℃
Flashpoint :	no flashpoint up to the boiling point
Viscosity :	thin consistancy at room temperature
Diluability :	diluable with water in any proportion
Storage stability :	at least 5 years in closed original containers at 0 ℃ to 50 ℃
Ecotoxicological data :	see Safety Data Sheet.

2. Physiological Behaviour

Given correct handling and observance of the health regulations applicable in the chemical industry, there is no danger of injurious effects on health.

Rubber gloves and safety glasses are essential.

If sulphophthalic acid comes into contact with the skin the affected part should be washed at once with ample water.

3. Application conditions

The electrolyte consists preferably of 150 – 250 g/l **sulphophthalic acid 50 %**
and 3-10 g/l sulphuric acid.

Current density :	1,5 - 6 amp/dm^2 (14 – 56 amp/sq.ft)
Potential :	30 – 100 Volts
Temperatur :	18 – 35 ℃ (65 – 95 ℉)
Time :	30 – 70 min. depending on the thickness

Realizable shades : bright bronze to black.

The dyeings are depending on the alloy.