



TECHNICAL INFORMATION

Reducing Agents

BRUGGOLITE[®] L40

Reducing agent for the emulsion polymerisation

Chemical Characterization

BRUGGOLITE[®] L40 is a stabilized, aqueous solution of sodium hydroxymethansulfinate.

Nomenclature	sodium hydroxymethane sulphinate dihydrate
HS-Code	28 31 10 00
Formula weight	154,1 g/mol

Properties

Appearance	colourless, slightly turbid liquid
Concentration in %	40
Density	1.26 g/cm ³
pH-Value (in a 10% aqueous solution)	app. 10
Alkaline resistance	good
Acid resistance	decomposition
Odour	slight internal odour

Health and Safety Data

According to 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work "product" is not defined as a chemical agent which meets the criteria for classification as a dangerous substance/preparation.

However, this does not a priori exclude that "product" will fall within the definition "hazardous chemical agent" according to Article 2b of 98/24/EC.

Therefore the actual situation at the workplace has to be determined. Further information is given in the corresponding safety data sheet which is available on request.

In any case the standard industrial safety and hygiene procedures when handling chemicals have to be observed.

The aforementioned remarks are deducted from the European legal system. Deviating or additional regulations in other legal systems must be observed accordingly when using the product.

General Description

BRUGGOLITE® L 40 is used in the emulsion polymerisation as a reducing agent respectively as a co-catalyst.

Depending on the redox-system of the emulsion, BRUGGOLITE® L 40 can be engaged in an acid-, neutral- or in an alkaline pH-range.

Typical redox-catalyst-systems in alkaline mediums consist of peroxides and iron-(II)-salts. Iron(II)-salts cleave the peroxides into radicals and alcohol anions. The iron(II)-ion itself is oxidized to the iron(III)-ion, that cannot cleave any further organic peroxides. Due to the fact that the assay of iron in the polymerisation mixture has to be as low as possible, the oxidized iron(III)-ions must be reduced again to iron(II)-ions. The reduction of iron(III)-ions is maintained by BRUGGOLITE® L 40.

By the usage of BRUGGOLITE® L 40 the concentration of iron in the polymerisation mixture can be held on the lowest possible level.

Regarding the polymerisation in acid medium, the organic peroxides can be cleaved with BRUGGOLITE® L 40 directly, without any iron salts.

Typical Application

BRUGGOLITE® L 40 is used for example for the polymerisation of

- Styrene-Butadiene-Rubber (SBR),
- Acrylonitrile-Butadiene-Rubber (NBR),
- Acrylonitrile-Butadiene-Styrene-Terpolymer (ABS),
- Polyvinylacetate (PVAC),
- Acrylates,
- Acrylic-Ester-Rubber (ACM) and
- Polyvinylchloride (E-PVC)

Handling

The storage of BRUGGOLITE® L 40 should be done in tanks of stainless steel 1.4575 (V4A) or plastics. For tubes polypropylene is suited. Due to reasons of stability the product should not be contacted with air.

