



TECHNICAL INFORMATION

Reducing Agents

Bruggolite®FF6 M

Reducing Agent for emulsion polymerization

General

Bruggolite®FF6 M is the first new derivative of sulfinic acid over a period of almost 90 years.

Bruggolite®FF6 M is invented, patented, registered, manufactured and marketed by Brüggemann Chemical.

Bruggolite®FF6 M is superior to all other reducing agents commonly used in the redox initiation of emulsion polymerizations.

Bruggolite®FF6 M is successfully used by customers worldwide for all areas of emulsion polymerization.

Bruggolite®FF6 M superior performance offers the potential to improve production processes as well as end-products.

- ➔ Increased Reactivity
- ➔ Faster Reactions
- ➔ Higher Safety due to Highest Reproducible Performance
- ➔ Decrease of VOCs
- ➔ Decrease of Residual Monomers
- ➔ Technical Advantages in the Polymerization Process
- ➔ Improved Properties for End Product Polymers and Latices
- ➔ No Discoloration of latex
- ➔ No Release of Formaldehyde or any other VOC
- ➔ Applicable over a wide pH range (acidic and basic)

Properties

Chemical characterization	Sodium salt of an organic sulfinic acid derivative
Appearance	White dustfree microgranules
Melting Point	> 200 °C decomposition
Solubility in water	125 g/l (20°C) 138 g/l (4°C)
Alkaline resistance	Good
Acid resistance	Decomposition
Odor	Product specific odor
HS-Code	28 31 10

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.

Application of Bruggolite®FF6 M

Bruggolite®FF6 M can be used in redox system in combination with all commonly used oxidizing agents.

Bruggolite®FF6 M should be applied in solutions of 3-5% concentrations.

Bruggolite®FF6 M should be used at reaction temperatures below 70°C. 60-65°C is optimal.

Bruggolite®FF6 M is applicable over a broad pH range. The optimal range is pH 4 to 6.

Polymer types

- Water based acrylates and vinylacetates
- Styrene/Butadiene latex (SBR)
- Acrylonitrile/Butadiene latex (NBR)
- Acrylonitrile/Butadiene/Styrene Terpolymer (ABS)
- Polyvinylacetate (PVAC)
- Acrylics and Acrylics ester latex (ACM)
- Polyvinylchloride (E-PVC)
- Ethylene Vinyl Acetate (EVA)
- Carboxylated latex (X-SBR)
- Other latex (PVC)
- Acrylic and Styrene Acrylic copolymers
- Vinyl Acetate- Acrylic and Maleic copolymers
- Polymethylmethacrylate (PMMA)
- Polyacrylate
- Special copolymers (for example VeoVa)
- several other water based polymers

Application fields

- Platicizer for concrete and mortar
- Building and construction chemicals
- Flocculants for water treatment
- Polymer surfactans
- Thicking agents for cosmetics and health care
- Ion exchange resins
- Polymers for paper coating
- Adhesives
- Binders for paints
- Polymers for printing inks
- Latex foams
- Non wovens
- Leather auxiliaries
- Impregnation for shoes

Food Contact Notification

Bruggolite®FF6 M has the food contact notification of the FDA and also of the German BfR with respect to the chapters listed below:

FDA:

- ➔ §175.105 "Adhesives"
- ➔ §177.2600 "Rubber articles for repeated use"
- ➔ §176.170 "Paper and board / aqueous and fatty food"
- ➔ §176.180 "Paper and board / dry food"

International Listings

Bruggolite®FF6 M is listed in the national inventories of all major markets. For further details please contact the responsible product manager.

Storage and Stability

Bruggolite®FF6 M has a significantly increased reactivity compared to other reducing agents, resulting in a higher sensitivity to ambient moisture.

In unopened packaging BrüggemannChemical guarantees a shelf life of at least 12 months if properly stored (25°C / dry).

Storing it together with oxidizing substances or with acids should be avoided.

Opened packaging, especially laboratory samples, should be closed tightly after use and stored under cool and dry conditions.

The stability of a Bruggolite®FF6 M solution decreases with lower concentration. A solution with 5% Bruggolite®FF6 M content should be used within some days, a 10% solution within one or two weeks. Generally only fresh solutions are recommended to be used.

Standard Packaging and Product Form

Bruggolite®FF6 M is packed in 25 kg PE bags. Standard delivery form is 20 bags/500 kg on a CP-1 pallet.

Bruggolite®FF6 M is delivered in a microgranular form that is absolutely free flowing and dust free.

For order volumes smaller than 500 kg please contact the responsible product manager.

Contact

For further information about Bruggolite®FF6 M please contact:

Dr. Uwe Robben
Product Manager
New Reducing Agents

BrüggemannChemical
L. Brüggemann KG
Salzstrasse 131
D-74076 Heilbronn
Germany

Phone: +49 7131 1575 225
PC-Fax: +49 7131 1575 25 225
Fax: +49 7131 1575 165
Mobile: +49 160 36 21 805

Email: uwe.robbe@brueggemann.com
Internet: www.brueggemann.com

Version dated November 22, 2007

Replaces Version dated 12/04

The information given herein and otherwise supplied to users is based on our general experience and, where applicable on the results of tests on samples of typical manufacture. However, because of the many factors which are outside our knowledge and control which can affect the use of these products, we cannot accept liability for any injury, loss or damage resulting from reliance upon such information.
