

# Product Data Sheet

## GROUTAID<sup>®</sup>

### Additive for cement injection grouts

Elkem ASA Silicon Products  
Drammensveien 169 P.O. Box 334  
Skøyen NO-0213 OSLO  
Fax: +47 22 45 01 11  
www.elkem.com

**Description** GROUTAID<sup>®</sup> is a silica fume based additive for use in combination with microcement and other cement-based grouts.

**GROUTAID<sup>®</sup> is an essential additive for improving cement injection grouts. It increases the efficiency of injection grouting by improving both the plastic and hardened properties of the grout, enabling injection into soils, and into cracks in the concrete and rocks.**

**Applications** GROUTAID<sup>®</sup> is suited to all applications where cement based grouts are currently used. Dosage can vary from 5% upward, depending on application. Contact Elkem representative or authorised agent for specific advice.

**Features** The advantages of using silica fume in cement based systems are well known from concrete technology. The microscopic particle size and pozzolanic reactivity of silica fume act to reduce bleeding and segregation, develop stronger and less permeable concrete, and increase the durability and resistance to chemical attack. These same properties are also important for injection grouts.

**Benefits** GROUTAID<sup>®</sup> improves the properties of the injection grout and injected formation. By improving the permeation capability of cement-based grouts, Groutaid<sup>®</sup> reduces the need to use chemical grouts, with subsequent advantages of cost reduction and environmental safety:

#### **Economy**

GROUTAID<sup>®</sup> provides a more cost effective injection by:

- Improved penetration implies that cement-based injection can be performed in finer soils and cracks than otherwise possible, and may reduce the use expensive chemical grouts
- Improved penetration implies that number of injection holes drilled can be reduced, or alternatively the total requirement for injection can be reduced
- Reduced risk of 2 or 3 rounds of grouting

#### **Stability**

A stable, non-segregating grout is extremely beneficial for successful injection. Stable grouts will ensure that cracks and voids will be thoroughly filled, which can lead to reduced need for injection. Addition of GROUTAID<sup>®</sup> means the addition of a great number of extremely fine particles of high specific surface area (SSA). This high SSA and corresponding internal attraction forces, keep the cement and silica fume particles suspended without settling within the water, allowing stable grout even at high water/powder ratios.

#### **Particle size**

The silica fume used in GROUTAID<sup>®</sup> production has been carefully selected and quality controlled, ensuring complete compatibility with the finest of microcements.

#### **Environment**

GROUTAID<sup>®</sup> is a non-toxic mineral based product. Injection grouts based on cement and Groutaid have a positive impact on the environment. Use of GROUTAID<sup>®</sup> is preferable to

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potentially harmful chemical grouts. GROUTAID<sup>®</sup> can be used to reduce risk of leaching of harmful substances through soils, such as in landfill.

#### Chemical & physical data

Property	Unit	Value
SiO <sub>2</sub>	%	Minimum 86.0
Carbon	%	Maximum 2.5
pH	-	4.0 - 7.0
Loss on ignition	%	Maximum 3.0
Specific surface area	m <sup>2</sup> /g	Minimum 15.0
Slurry density*	kg/m <sup>3</sup>	1360 – 1420
Solid content	% wt	48.0 – 52.0
Viscosity	mPas	100
Coarse particles, >45 µm	%	Maximum 1.0
Colour	-	Grey

*Test Methods available on request*

*\*When packed*

#### Packaging

25 litres, 200 litres, 1000 litres and bulk in road tanker.

#### Storage and handling

GROUTAID<sup>®</sup> is supplied as an aqueous suspension of silica fume. Protect from freezing during storage.

#### Health, safety & environment

Refer to Product Safety Information (PSI) document on our website: [www.elkem.com](http://www.elkem.com)

#### Quality assurance

Elkem Silicon Products management system for development, processing and supply of GROUTAID<sup>®</sup> is certified to ISO 9001:2015. The chemical and physical properties of GROUTAID<sup>®</sup> are regularly tested.

#### Sustainability

For Elkem, sustainability is central to our business strategy. Our mission is to provide advanced material solutions shaping a better and more sustainable future, adding value to our stakeholders globally. We are committed to reducing embodied carbon emissions. For further information, please visit [www.elkem.com/sustainability/](http://www.elkem.com/sustainability/) or contact us to learn more about our sustainability roadmap.

#### Additional Information and contact

See additional Elkem data sheets and technical papers on our website: [www.elkem.com](http://www.elkem.com)  
 All data listed are reference values subject to production related tolerances. Although reasonable care has been taken in the preparation of the information contained herein, it still remains the duty of the user to prove the suitability of this material for their application.