Technical Data

ACUMER™ 9460

High-Performance Dispersant for Fine $CaCO_3$ Slurry

Description

ACUMER™ 9460 is the sodium salt of a modified acrylic acid polymer, specially designed to enhance dispersancy for mineral slurries in optimizing the different factors affecting dispersancy:

- Polymer molecular weight
- Polymer composition
- Polymer structure

ACUMER 9460 dispersant improves the efficiency of secondary grinding in fine ground calcium carbonate production by providing lower viscosity than other comparable dispersants. It also provides better storage viscosity stability of mineral slurries at acceptable levels under heat aged and room temperature conditions.

Physical Properties*

Property	Typical Value
Appearance	Clear, light amber solution[1]
Chemical nature	Polycarboxylate
Grade	Partial sodium salt
Average molecular weight (Mw)	3600
Total solids (%)	~42
pH as is (at 25°C)	~5.5
Bulk density (at 25°C)	~1.3
Brookfield viscosity (mPa.s/cps at 25°C)	~500

These properties do not constitute specifications

[1]*A slight haze may appear; this does not affect the intrinsic properties of the product or its performance.*

Dosage

Kaolin	
Hydrated, calcined, delaminated	
70-75% slurries	0.2-0.5% w/w DryACUMER 9460
Calcium Carbonate	
Coarse ground	
71-76% solids, 60% <2 micron	0.2-1.0% w/w ACUMER 9460
Fine ground	
71-78% solids, 90% <2 micron	0.4-1.2% w/w ACUMER 9460

For fine ground calcium carbonate (FGCC), typically a fully neutralized product (ACUMER 9400) is used in conjunction with a partially neutralized one (ACUMER 9410 or ACUMER 9460).

Form No. 812-00359-0216BBI

Applications

ACUMER™ 9460 has been specially designed for the grinding of ground calcium carbonate to get very fine particle slurries (90% < 2 µm). With the use of ACUMER 9460, viscosity remains stable in time and no gel formation occurs.

Ground Calcium Carbonate Grinding – Slurry Viscosity

ACUMER 9460 shows very good performance compared to a standard polyacrylate.

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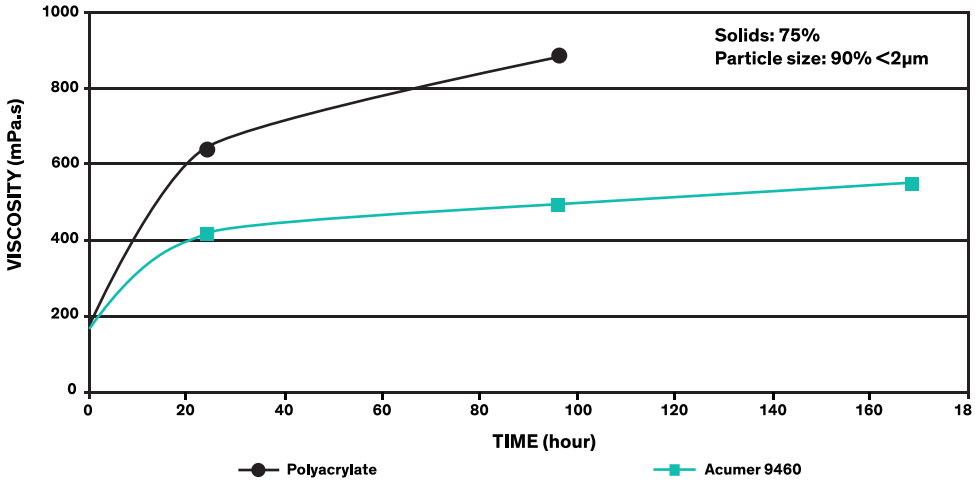
Figure 1.



FDA Clearance

ACUMER 9460 dispersant polymer complies with the FDA Food Additives regulations indicated below, provided that the final formulation meets the limitations and other conditions prescribed by the regulation.

- 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty food
- As a pigment dispersant in coatings at a level not to exceed 0.25% by weight of the pigment
- 21 CFR 176.180 Components of paper and paperboard in contact with dry food
- 21 CFR 176.110 Not to exceed 2% of paper or paperboard weight (based upon solids of product)

For specifics on any limitations, please contact your local Dow sales representative.

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Product Stewardship

When considering the use of any Dow products in a particular application, you should review the latest Material Safety Data Sheets from Dow and ensure that they are intended for safe use. For Material Safety Data Sheets and other product safety information, contact Dow. Before handling any other products mentioned in the text, you should obtain available product safety information and take necessary steps to ensure safety of use.

No chemical should be used as or in a food, drug, medical device or cosmetic, or in a product or process in which it may contact a food, drug, medical device or cosmetic until the user has determined the suitability and legality of the use. Since government regulations and use conditions are subject to change, it is the user's responsibility to determine that this information is appropriate and suitable under current, applicable laws and regulations.

Dow requests that the customer read, understand, and comply with the information contained in this publication and the current Material Safety Data Sheet(s). The customer should furnish the information in this publication to its employees, contractors and customers, or any other users of the product(s), and request that they do the same.

The Dow Chemical Company

U.S., Canada and Mexico
Toll Free 800 447 4369*

Latin America +55 11 5188 9222

Europe
Toll Free +800 3 694 6367*
+32 3 450 2240

Asia Pacific
Toll Free +800 7776-7776*
+60 3 7958 3392

Middle East (Dubai) +971 4 453 7000

North Africa (Cairo) +202 2 480 1466

Sub-Saharan Africa (Johannesburg) +27 11 575 1547

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Note: This guide is designed as a general product overview. Please contact your local Dow representative for up-to-date, detailed technical information including registrations and use limitations and to discuss individual applications or requirements.