



Flexisperse™ 450

Overview

- Aqueous, Partially Neutralized Polyacrylic Acid
- Multi-Functional Performance in the Processing and Efficacy of Cleaning Compounds
- Provides Dispersant Properties to Maximize Slurry Solids to Spray Dryer Crutcher Feeds
- Sequesters Hardness Ions Allowing for Optimum Surfactant Performance
- Delivers Excellent Crystal Growth Inhibition, Anti-Encrustation, and Anti-Redeposition of Particulate Soil
- Stable Builder in High Alkaline / Bleach Industrial & Institutional Cleaners

Applications

- Co-Builder in Consumer Powder Laundry Detergents
- Performance Additive for Auto Dishwash Formulations
- Formulary Additive for Hard Surface, Bottle Wash, Ware Washing and other I&I Applications
- Textile Scour to Prepare Fabrics for Dyeing
- General Purpose Dispersant for Inorganic Pigments Including CaCO₃ and TiO₂

Technical Information

Flexisperse 450 is a partially neutralized polyacrylate polymer specifically designed as a detergent and cleaning formulation additive. Flexisperse 450 allows the end user to receive product at the highest % actives while conforming to DOT regulations. This polymer was originally used as a production assist that allowed producers to disperse and feed higher solid slurries to the spray dryer, optimizing throughput and energy consumption. Legislation that reduced and ultimately eliminated Sodium Phosphates in detergents led to reformulation of many laundry formulations to a zeolite /polyacrylate co-builder system for which the Flexisperse 450 was optimized. The combination of molecular weight and molecular weight distribution is designed for the effective sequestration of hardness ions in the wash water, allowing the surfactants in the cleaning formulation to work optimally. Typically added to formulations at 2-4% actives, the anionic character of the polymer serves to prevent the redeposition of particulate soil onto the washed garment and the encrustation of CaCO₃ from soda ash built formulations. In Industrial and Institutional (I&I) applications, Flexisperse 450 provides the additional benefit of stability in formulations that are of high pH or require bleach stability.

For further information, technical service, and samples, please contact us at (770) 607-9340 or via our website at ictchemicals.com

Typical Properties

Appearance	Clear to Slightly Hazy Liquid
Color	Water White to Pale Amber
Grade	Partially Neutralized Na Salt
Average molecular weight (Mw)	4000 -5000
Total solids (%)	49.0 - 51.0
Specific gravity (at 25°C in g/cc)	1.2 - 1.4
pH as is (at 25°C)	3.0 - 4.0
Viscosity Brookfield (mPa.s/cps at 25°C)	400 -1200

Packaging and Handling

Flexisperse 450 is available in bulk tank trucks (44,000 lbs), 275 gallon totes (approx 2750 lbs) and 55 gallon plastic drums (Net Wt. 550 lbs).

DOT Classification is Non Regulated.

This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' intellectual property rights.