

**Kao Corporation, S.A.****Member of Kao Chemicals Europe**

Puig dels Tudons, 10 -E-08210 - Barberà del Vallès
Phone : +34-93-7399300 e-mail : marketing@kao.es
Fax : +34-93-7399377 Web : www.kaochemicals-eu.com

**APROVADO**

Dep. Qualidade

CELLESH® 200-E

- Co-polymer
- Chelating agent

CHEMICAL IDENTIFICATION

Chemical Name : Acrylic - Maleic copolymer, neutralized, sodium salt

CAS Number : 52255 – 49 – 9

TECHNICAL SPECIFICATIONS

		Kao Method
APPEARANCE (20°C) :	Yellowish transparent liquid	KCSA-258
pH (10% in water) :	7.0 - 9.0	KCSA-014
DRY MATTER (% , criterion 4) :	39 - 41	KCSA-283
VISCOSITY (25°C, cPs) :	3000 max.	KCSA-227

TYPICAL PROPERTIES

ODOUR :	Characteristic
MELTING POINT (°C) :	0 approx.
SOLUBILITY IN WATER (20°C) :	Soluble
DENSITY (20°C, g/mL, "spot") :	1.28 approx.
CHARACTER :	Anionic

CELLESH® 200-E

APPLICATION PROPERTIES

- The tendency to a partial reduction, or in some cases, totally elimination of phosphates in detergents (HDPD), due to eutrofication problems, has led to reduce efficiency, such as:
 - Decrease in detergency
 - Increase in re deposition
 - Reduction in dispersion power
 - Increase in incrustations
- The acrylic polymers and acrylic-maleate copolymers are the best solutions for avoiding this type of deficiency, especially in phosphate-free detergents, which cause incrustation problems of inorganic and organic origin.
- The use of an acrylic homo-polymer (CELLESH® 100) or an acrylic-maleate copolymer (CELLESH® 200 and CELLESH® 200-E) depends on the final formula and on the property that needs to be improved, chelating effect or dispersant effect. These properties are usually related to the molecular weight of the polymer. High molecular weight polymers (Ex. CELLESH® 200-E) have usually better chelating properties than lower molecular weight products (Ex. CELLESH® 200) which are more effective as dispersing agents of inorganic salts.
- Usually acrylic polymers have, in aqueous solutions, better solubility than acrylic-maleic copolymers. For this reason CELLESH® 100 is mainly recommended for liquid products
- The good stability of the polymers included in the CELLESH® range in acidic and alkaline mediums, makes them suitable for different types of all purposes detergents, machine dishwashing products, etc . The use of CELLESH® in these detergents assures cleaning power, increases the dispersion of insoluble particles and avoids the precipitation of salts ("spotting").

STORAGE – HANDLING – SHELF LIFE

- CELLESH® 200-E is chemically stable for a long period of time under appropriate storage conditions (temperature of 25°C and original unopened container).
- In the case of long storage time, it is advisable to homogenise the product before its use, especially if it has been submitted to low temperatures. Small changes in the appearance can be easily recovered by applying a moderate agitation at 25-30°C. A general advise is to use the complete container every time.
- The shelf life of CELLESH® 200-E can be considered of 2 years minimum under proper storage conditions. After longer storage time some of its characterising parameters (*odour, appearance, colour, pH, ...*), should be checked before using it.

The information and recommendations in this publication are to the best of our knowledge reliable. However, nothing herein is to be construed as a warranty or representation. Users should make their own tests to determine the applicability of such information or the suitability of any products for their own particular purpose. Statements concerning the use of the products described herein are not to be construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is assumed.