

OPTIMASE® CX 57E

Granular Alkaline Cellulase

DESCRIPTION

OPTIMASE® CX 57E enzyme is an alkaline granular cellulase product. The OPTIMASE® CX 57E cellulase is derived from a genetically modified strain of *Bacillus subtilis* which has been engineered to give superior hydrolysis of cellulose-based materials in the neutral-alkaline pH range and enhanced stability in the presence of oxidative bleaches.

The OPTIMASE® CX 57E cellulase is produced using a proprietary technology from DuPont. This technology produces highly uniform, virtually dust-free granules which have excellent stability and solubility.

The OPTIMASE® CX 57E cellulase is highly effective for hydrolysis of cellulosic materials. The cellulase activity of OPTIMASE® CX 57E is unaffected by surfactants or oxygen bleaches at concentrations up to 1.8 grams/liter.

PRODUCT CHARACTERISTICS

Activity:	400-460 U/g*
Appearance:	Tan to white granules
Bulk Density:	0.8 – 1.0 g/ml

(*The activity of OPTIMASE® CX 57E enzyme is expressed in *o*-Nitrophenyl β -D-Cellobioside (NPC) units per gram against an internal standard. A detailed assay method is available upon request.

BIOCHEMICAL PARAMETERS

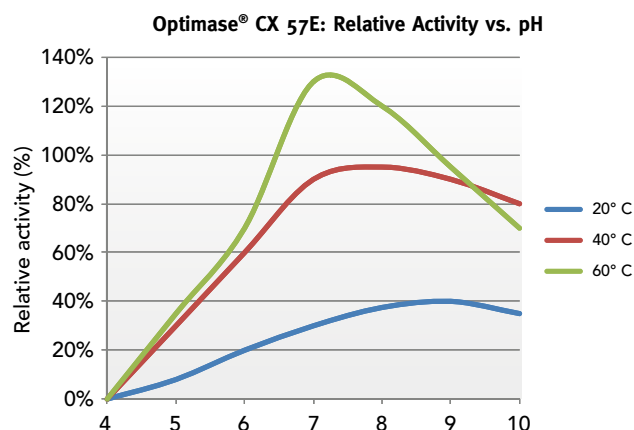
Enzyme type:	Cellulase, endo-1,4- β -D-glucanase
CAS#:	9012-54-8
EC/UB#:	3.2.1.4

pH DEPENDENCY

The OPTIMASE® CX 57E cellulase is effective over the pH range from 5.5 to 9.0 with optimum performance at pH 7.0. The exact pH optimum will depend on process variables, including temperature, time, substrate concentration, and substrate composition.

TEMPERATURE DEPENDENCY

The OPTIMASE® CX 57E cellulase is effective over the temperature range from 40 to 60° C (104 -140° F) with optimum performance at 50° C (122° F). The exact temperature optimum will depend on process variables, including pH, time, substrate concentration, and substrate composition.



DOSAGE

The determination of the required dosage of OPTIMASE® CX 57E cellulase should be based upon actual applications conditions including factors such as pH, temperature, reaction time, substrate composition, and substrate concentration.

PACKAGING AND STORAGE

OPTIMASE® CX 57E enzyme is available in various standard package sizes. Please contact DuPont for detailed information.

OPTIMASE® CX 57E will meet the declared activity of 400 U/g upon arrival at the customer's plant.

For maximum long-term stability we recommend storage of OPTIMASE® CX 57E enzyme at temperatures less than 30°C (86° F). Detailed storage and stability information is available upon request.

REGULATORY STATUS

OPTIMASE® CX 57E enzyme is an industrial grade enzyme preparation.

SAFETY & ENZYME HANDLING

Inhalation of enzyme dust and mists should be avoided. In case of contact with the skin or eyes, promptly rinse with water for at least 15 minutes. For detailed handling information, please refer to the appropriate Material Safety Data Sheet, the Enzyme Technical Association (ETA) handbook “Working Safely With Enzymes”, and the Association of Manufacturers and Formulators of Enzyme Products (AMFEP) handbook “Guide to the Safe Handling of Microbial Enzyme Preparations”. These documents are available from DuPont.

CONTACT INFORMATION

NORTH AMERICA

Rochester, New York (USA)

☎ +1 800 847 5311

☎ +1 585 256 5295

ASIA/PACIFIC

Singapore

☎ +65 6511 5600

☎ +65 6511 5666

EUROPE, MIDDLE EAST & AFRICA

Leiden, The Netherlands

☎ +31 71 5686 168

☎ +31 71 5686 169

Shanghai, P.R. China

☎ +86 21 2307 9588

☎ +86 21 2307 9599

Mumbai, India

☎ +91 22 3008 7131

☎ +91 22 3008 7150

LATIN AMERICA

Buenos Aires, Argentina

☎ +54 11 4021 4700

☎ +54 11 4021 4800

São Paulo, Brazil

☎ +55 11 4613 3800

☎ +55 11 4612 1101

For more information, speak to a member of the Home & Personal Care team at DuPont Industrial Biosciences.

Website: biosciences.dupont.com

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