

SMART ENZYME

Multi-enzyme granule for use in powder laundry products

Introduction

SMART ENZYME is a high active multi-enzyme granule (MEG) for use in powder laundry products. It is specifically developed for strong stain removal performance on a most common and stubborn range of consumer relevant soils. SMART ENZYME is based on ENZOGUARD SD granulation technology of ELIZZYME. Besides high storage stability and dissolution speed, average particle size is narrowed to <400 micron ensuring excellent distribution and thus consistent detergent washing performance.

SMART ENZYME is useful for removing common consumer problem soils, such as blood, cuff and collar stains, grass, milk, gravy and various tough starch containing food stains. Starches are present in many natural and processed foods, such as puddings, yogurts, sauces, custards, soups, and salad dressings, as well as noodles, potato, rice and pastas.

SMART ENZYME hydrolyzes the peptide bonds in proteins and the α -1,4-glycosidic bonds in starch. The remaining peptides, amino acids and water-soluble oligosaccharides are then removed by the wash liquor.

Typical product characteristics/ properties

Product	SMART ENZYME
Min, protease activity' [XXU/g]	4300
Min. amylase activity' [POU/g]	5400
Product form	Free flowing granulates
Appearance	Off-white

Assey methodology is available upon request.

Usage recommendations

Application

SMART ENZYME can be used in formulation of powder laundry detergents and is readily soluble in application-relevant solutions at all levels of concentration, pH and temperature which may occur during normal usage.

Stain name	Code	Supplier	Functionality
Blood/Milk/ Ink on cotton & polyester/cotton	E-116 & E-117	EMPA	Protease
Pigment, Oil, Milk	C-10	CFT	Protease
Corn starch on polyester cotton	E-162	EMPA	Amylase
Corn starch, rice, potato all on cotton	Cs-26, cs27, c28	CFT	Amylase

Dosage

Recommended dosage of SMART ENZYME is 0.10%-1% (w/w in detergent). Exact dosage should be based upon wash conditions, detergent formulation, detergent dosing and the desired level of performance.

Storage and stability

Recommend to store ambient, not exceeding 25°C. Packaging must be kept intact, dry, and away from sunlight. This product is formulated for maximum storage stability. Specific product storage stability data is available upon request.

Packaging

SMART ENZYME is available in different types of packaging. Please contact your sales representative for details.

Composition

The granulate contains enzyme concentrate, inorganic salts and coating materials. Detailed composition data may be made available, please contact your sales representative for more information.

Product and manufacturing

This product does not contain genetically engineered organisms. The enzyme product is manufactured by fermentation of microorganisms that are not present in the final product. The production organisms and the enzyme effectiveness are improved by means of modern biotechnology.

Safety and enzyme handling

Inhalation of dust from granulated enzymes should be avoided. In case of accidental spillage or 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 of Fermentation Enzyme Products (Amfep) handbook Guide to the Safe Handling of Microbial Enzyme Preparations, and the Soap and Detergent Association (SDA) handbook Work Practices for Handling Enzymes in the Detergent Industry.

Contact information

For more information, please contact your sales representative, a member of the E Home- and Personal Care team.

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