## BIO–D 15 PLUS POWDER

Highly effective blend of amylase based enzyme for cotton and its blends. It has peak activity at 98°C

<table>
<thead>
<tr>
<th>CONSTITUTION</th>
<th>α- Amylase enzyme preparation</th>
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</thead>
<tbody>
<tr>
<td>APPEARANCE</td>
<td>Brownish powder</td>
</tr>
<tr>
<td>MISCIBILITY</td>
<td>Dispersible in water</td>
</tr>
<tr>
<td>COMPATIBILITY</td>
<td>Compatible with nonionic products</td>
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</tbody>
</table>

### HIGHLIGHTS

- Good compatibility with chemicals in desizing bath
- Applicable by exhaust as well as pad batch method
- Highly effective for removal of size with partial scouring property
- Apply at 60-98°C with pH 6.5 – 7.5
- Biodegradable and non-corrosive in nature
- Economical operation

### APPLICATION

Starch consists of two different polysaccharides (amylose and amylopectin) and is insoluble in water hence, it must be decomposed into fragments which dissolve more easily. The mechanism of enzymatic desizing is as follows:

- Wetting, pH buffering, anti catalytic action
- Swelling, penetration, cracking and de-stabilization of size layers
- Gelatinization
- Enzyme attack: The enzyme takes the role of molecular scissors.
- Wash off, dispersion of the degradation products

**Bio- D 15 Plus Powder** thus breaks the starches into soluble fragments by hydrolysis and can be thus easily removed from the fabric. In addition the side activities help to break down pectins and glucans resulting in partial scouring effect.
Effect of application parameters on activity of Bio-D 15 Plus Powder

**Temperature**

- Activity vs. °C

**pH**

- Activity vs. pH
### GUIDELINES

#### 1. ENZYMATIC DESIZING

##### 1.1 LONG LIQUOR MACHINE

| Bio-D 15 Plus Powder | 0.2-0.3 % | pH: 6.5-7.5
| Kleenox PSF Liquid | 0.5-1.0 gms/lit | 60-80°C for 30-90 mins |

##### 1.2 JIGGER

| Bio-D 15 Plus Powder | 0.5-1.0 % | pH: 6.5-7.5
| Zywet APF Liquid | 0.2-0.5 % | 60-98°C for 2-4 ends |

##### 1.3 CONTINUOUS - PAD BATCH

| Bio-D 15 Plus Powder | 1.0-4.0 gms/lit | pH: 6.5-7.5
| Common salt | 1.0-5.0 gms/lit | Pad at 95°C & Batch at RT for 8-12 hours |
| Kleenox PSF Liquid | 2.0-5.0 gms/lit | % Expr.: 80-100 |

##### 1.4 GARMENT - DRUM WASHER

| Bio-D 15 Plus Powder | 0.2-0.5 % | pH: 6.5-7.5
| Kleenox LFAF Liquid | 1.0-1.5 gms/lit | 60-70°C for 20-30 mins |
| Fibrolube HML Liquid | 0.1-0.3 % |
| Greenpol ZBS Pdr | 0.1-0.2 gms/lit |
| Or Greenpol A/ANF Liquid | 1.0-2.0 gms/lit |

#### STORAGE

Bio-D 15 Plus Powder has to be stored in an air-tight, cool & dry place, away from direct heat and sunlight

#### PACKING

Bio-D 15 Plus Powder is available in 20kg (4 x 5 Kg.) packs and 30/50 Kg. (30/50 Kg x 1) packs to suit customers requirements

#### NOTE

The colour of the product is not an indication of product strength, it may vary from batch to batch

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The information and data contained herein has been compiled based on information we believe reliable. Users should thoroughly test all applications and independently conclude satisfactory performance before commercialization, as these recommendations are non-binding. Users assume all liabilities for use of the chemicals. We are not liable for any advice which we may have failed to give.

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