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ROCKSOFT™ ANTARCTIC LTC CONC

Product #150

(FOR FORMULATION PURPOSES ONLY.)

I. INTRODUCTION:

ROCKSOFT™ ANTARCTIC LTC CONC is a concentrated cellulase intended to be used in powdered cellulase blends. **ROCKSOFT™ ANTARCTIC LTC CONC** has a wide operating range effective from 30°C to 60°C (86°F to 140°F) and a pH range effective from pH 5.0 to pH 6.5.

II. PHYSICAL PROPERTIES:

Appearance: Tan to cream Powder (Note that color does not affect or reflect activity.)
 Odor: Slight fermentation odor
 pH (1% soln): 3.5 - 5.5
 Activity: 5500 ± 250 DTU/g

III. PRODUCT CAPABILITIES:

When run as directed in this bulletin, **ROCKSOFT™ ANTARCTIC LTC CONC** can be utilized to accomplish the following:

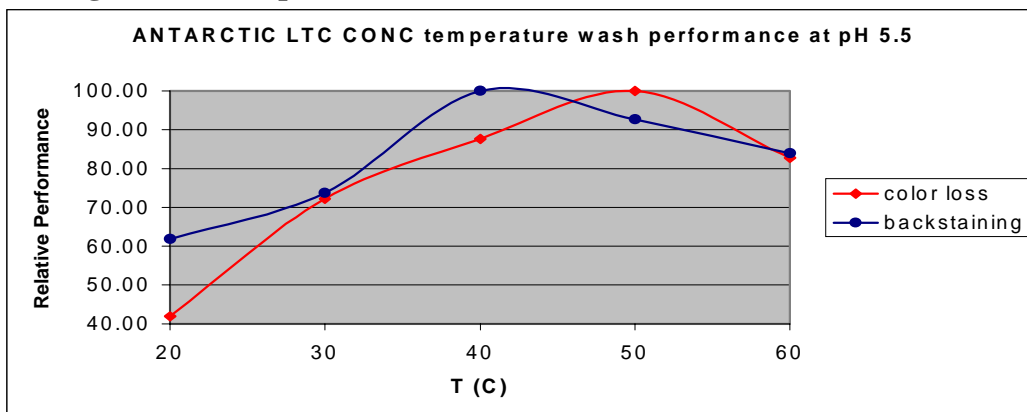
1. Significantly soften 100% cotton fabrics, both woven and knits.
2. Increases the "stone wash" effect on rotary washed garments when using a significant amount of pumice stones and/or other abrasives.

IV. PROCESSING CONDITIONS: GENERAL

ROCKSOFT™ ANTARCTIC LTC CONC will function from a pH of 5.0 to 6.5 and will function from 30°C to 60°C (86°F to 140°F). We recommend an operating pH of 5.0 to 5.5 and temperature of 40°C to 50°C (104°F to 122°F).

If **ROCKSOFT™ ANTARCTIC LTC CONC** is used as an ingredient in compositions that are used in **STONEWASHING** applications, these compositions should be used in combination with a significant amount of pumice stones.

Figure 1: Wash performance of ANTARCTIC LTC CONC on denim.



V. RECOMMENDATIONS FOR FORMULATION:

ROCKSOFT™ ANTARCTIC LTC CONC functions well at pH 5.5 and 40°C. Formulated products contain the following components.

ANTARCTIC LTC CONC	10.0% to 20.0% (depending on the strength desired)
TSC:Adipic (3.5:1)	50.0-80.0% (trisodium citrate, adipic acid) for pH 5.5
Abrasive*	5.0% (bone dry pumice or other abrasive like popped perlite)
Detergent**	5.0-40.0% (granulated C12-14 linear nonionic alcohol with EO mole 35 and up)
Wetter***	1.0% (100% solids like Union Carbide Tergitol 15-S-9)

Example formula for pH 5.5 (products should be added in this order)

TSC	46.2%
Adipic	13.2%
Perlite	5.0%
Detergent	20.0%
Wetter	1.0%
ANTARCTIC LTC CONC	14.6%

For extra protection against moisture regain add desiccant bag in packaging.

* Pumice should be bone dry to prevent adding extra moisture to the product. Perlite should be the popped variety.

**The detergent is available from major nonionic detergent manufacturers like BASF, Clariant, or Henkel.

*** This is important to insure a uniform blend.

VI. STORAGE CONDITIONS:

ROCKSOFT™ ANTARCTIC LTC CONC retains more than 90% activity after four months when stored at 25°C (77 °F) out of direct sunlight and in the original, closed container. **ROCKSOFT™ ANTARCTIC LTC CONC** also retains more than 90% activity after 1 month when stored at 38°C (100 °F). Do not let freeze.

VII. INACTIVATION:

ROCKSOFT™ ANTARCTIC LTC CONC can be inactivated by raising the pH above 11 or use **DAD** at 2.0% OWG or temperature above 71°C (160°F) or a combination of the two. After the desired effect has been achieved, we recommend inactivating **ROCKSOFT™ ANTARCTIC LTC CONC** within the next operating bath.

VIII. PACKAGING:

ROCKSOFT™ ANTARCTIC LTC CONC is packaged in 75 kg fibre drums.

IX. TECHNICAL SERVICE:

Information covering specific applications for this product is available from your Dyadic International, Inc. sales/technical representative. Call your sales/technical representative for any questions, comments, or help that you need!

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