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ROCKSOFT™ NCE 5000

Product #158

(FOR FORMULATION PURPOSES ONLY.)

I. INTRODUCTION:

ROCKSOFT™ NCE 5000 is a powdered neutral cellulase for use in blended formulations. **ROCKSOFT™ NCE 5000** is a neutral form of cellulase and is best run at a pH of 6.0 - 6.5 and temperature of 40°C - 60°C (104°F - 140°F). **ROCKSOFT™ NCE 5000** is capable of being used in cold water washes to 30°C.

II. PHYSICAL PROPERTIES:

Appearance: Tan to reddish brown (Note that color does not affect or reflect activity.)
Odor: Slight fermentation odor
pH (1% soln): 7.5 ± 1.0
Activity > 45,000 DNU/g

Activity is based on an internal standard and should not be used to compare to other products with different activity units or products with different enzyme components with the same activity units. The activity reported with each lot should only be used to confirm consistency from lot to lot.

III. PRODUCT CAPABILITIES:

When run as directed in this bulletin, **ROCKSOFT™ NCE 5000** 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.
3. May be used in pre-washing to further increase softening.
4. May be used for cold water wash as low as 30°C.

IV. PROCESSING CONDITIONS: GENERAL

ROCKSOFT™ NCE 5000 will function from a pH of 5.5 to 7.0. We recommend an operating pH of 6.0 to 6.5. **ROCKSOFT™ NCE 5000** will function from 30°C - 60°C (86°F - 140°F). We recommend an operating temperature of 50°C - 60°C (120°F - 140°F).

If **ROCKSOFT™ NCE 5000** 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.

V. RECOMMENDATIONS FOR FORMULATION:

All formulations should buffer to a pH of 6.5. All Percentages are on the total weight of the blended product.

Formulated products contain the following components:

NCE 5000	1.0-5.0%
MSP:DSP(11:1)	50.0-80.0% (monosodium phosphate, disodium phosphate)
Abrasive*	balance to 10% (bone dry pumice or other abrasive like popped perlite)
Detergent**	5.0 – 10.0% (granulated C12-14 linear nonionic alcohol with EO mole 35 and up.)
Wetter***	Up to 1.0% of liquid nonionic wetter with 100% solids

Example formulas	1	2	(products should be added in this order)
MSP	55.0%	55.0%	
DSP	5.0%	5.0%	
Sodium Sulfate	27.0%	25.0%	
Perlite	5.0%	5.0%	
Detergent	5.0%	5.0%	
Wetter	1.0%	1.0%	
NCE 5000	2.0%	4.0%	

For extra protection against moisture add a 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.

***The wetter should have 100% solids and be liquid at room temperature like Union Carbide Tergitol 15-S-9.

VI. STORAGE CONDITIONS:

ROCKSOFT™ NCE 5000 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™ NCE 5000** also retains more than 90% activity after 1 month when stored at 38°C (100°F).

VII. INACTIVATION:

ROCKSOFT™ NCE 5000 can be inactivated by raising the pH above 11 or temperature above 71°C (160°F) or a combination of the two. After the desired effect has been achieved, we recommend inactivating **ROCKSOFT™ NCE 5000** within the next operating bath.

VIII. PACKAGING:

ROCKSOFT™ NCE 5000 is packaged in 75 kg fiber drums.

IX. TECHNICAL SERVICE:

Information covering specific applications for this product is available from your Dyadic International (USA), Inc. sales/technical representative. We will work with you to enhance processes and solve problems, in addition to assisting you in achieving the end result/look desired. Call your sales/technical representative for any questions, comments, or help that you need!

Nothing disclosed is to be construed as a recommendation to use our products in violation of any patents. The information presented is believed to be accurate. However, said information and products are offered without warranty or guarantee, except as to the composition and purity stated herein since the ultimate conditions of use and variability of the materials treated is beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale. The goods described herein are sold as is and with all faults. The seller specifically disclaims all warranties in connection with the sale of the goods, both express and implied, including, without limitation, the warranties of merchantability and fitness for any particular purpose, as those terms are defined in the Uniform Commercial Code of Florida. The seller shall not be liable for any incidental or consequential damages whatsoever.