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Rocksoft® ACE P150

Product #122

(FOR FORMULATION PURPOSES ONLY)

I. INTRODUCTION:

Rocksoft® ACE P150 is a powdered acid cellulase approximately four times the strength of our liquid acid cellulase, **BioACE Plus**, and should be cut with a pH buffer, detergent, and any other desired additive to achieve the same performances as **BioACE Plus**.

II. PHYSICAL PROPERTIES:

Appearance: Tan to cream powder (Note that color does not affect or reflect activity)
Odor: Slight fermentation odor
pH (1% soln): 4.5±1.0
Cellulase Activity: ≥115,000 Units/g

III. PRODUCT CAPABILITIES:

When run as directed in this bulletin, **Rocksoft® ACE P150** can be utilized to accomplish the following:

1. Increases the "stone wash" effect on rotary washed garments when using a significant amount of pumice stones and/or other abrasives.
2. May be used for biopolishing/depilling of garments at an acid pH.
3. Can desize TMKP sized fabrics alone and aids in desizing other sized fabrics when used in conjunction with a nonionic detergent or amylase.
4. May be used in pre-washing to further increase softening.

IV. PROCESSING CONDITIONS: GENERAL

Rocksoft® ACE P150 will function from a pH of 4.5 to 5.5. We recommend an operating pH of 4.5 to 5.0 with 4.8 as an optimum. Acetic acid based pH controls are preferred over citric and phosphate.

Rocksoft® ACE P150 will function from 45°C - 60°C (113°F - 140°F). We recommend an operating temperature of 55°C - 60°C (131°F - 140°F).

If **Rocksoft® ACE P150** 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.

The closer the operating parameters are kept to above recommendations, the better the utilization of

Rocksoft® ACE P150. The recommended liquor to goods ratio is 6:25:1 for stone wash applications and 7:1 to 8:1 for softening and fuzz removal.

V. RECOMMENDATIONS FOR FORMULATION:

All formulations should buffer to a pH between 4.5 and 5.0.

All percentages are on the total weight of the blended product.

ACE P150	4.0% to 25.0% (depending on the strength desired)
TSC:Adipic (3.5:1)	50.0-80.0% (trisodium citrate, adipic acid) for pH 5.0
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 15-S-9)

Example formula for pH 5.0 (products should be added in this order)

TSC	42.5%
Adipic	21.5%
Perlite	5.0%
Detergent	20.0%
Wetter	1.0%
ACE P150	10.0%

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

VI. STORAGE CONDITIONS:

Rocksoft® ACE P150 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® ACE P150 also has less than a 10% activity loss after 1 month when stored at 38°C (100 °F). Do not let freeze.

VII. INACTIVATION:

Rocksoft® ACE P150 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® ACE P150** within the next operating bath.

VIII. PACKAGING:

Rocksoft® ACE P150 is packaged in 25 kg fibre drums.

IX. TECHNICAL SERVICE:

Information covering specific applications for this product is available from your Dyadic International, 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.