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FibreZyme™ PBR 100

Product #957

(Considerations in applications for Pulp and Paper.)

Description:

FIBREZYME PBR 100 is an enzyme complex that selectively modifies cellulosic papermaking fibers. **FIBREZYME PBR 100** is in powdered form and will operate in broad range of pH 4.5–8.5 and temperature 25°C–60°C (77°F–140°F).

Product Benefits:

When applied as directed in this bulletin, **FIBREZYME PBR 100** can help accomplish the following:

- Eliminates the need for soda (caustic) pulping.
- Reduces Refining time or Amperage leading to reductions in electrical costs.
- Reduces fines leading to cleaner white water loops.
- Disperses stickies thus reducing their frequency and size.
- Increases whiteness and brightness.
- Improves paper strength properties.
- Improves paper formation and drainage leading to either the reduction of steam demand for paper drying or conversely increases in the paper machine speed and runnability.
- Possible reduction in Vessel Stick associated with printing.

Properties:

Appearance: Tan to light yellow powder (Note that color does not affect or reflect activity.)
Odor: Slight fermentation odor
Solubility: Miscible with water
pH (1% solution): 4.5 ± 1.0

Effect of Temperature:

FIBREZYME PBR 100 will function from 25°C–70°C with an optimum of 50°C–60°C.

Higher operating temperature results in higher enzymatic activity providing lower enzyme dosage for a particular application.

Effect of Ph:

FIBREZYME PBR 100 will function from a pH of 4.5–8.5 with an optimum of 7.0.

Dosage:

FIBREZYME PBR 100 is added at a dosage between 20-50 g/ton (metric ton) of dry pulp. We have found a general optimum at 30 g/ton. Contact your representative for further assistance on determining optimal dosage for your mill. The enzymatic treatment is normally performed at the digester.

As there is an inverse relationship between reaction time and enzyme dosage to obtain a maximum effect, tank levels where enzymatic treatment is performed must be kept at the highest possible level while maintaining adequate mixing.

Termination or Inactivation of Activity:

FIBREZYME PBR 100 can be inactivated by raising the pH above 11.0 or temperature above 71°C (160°F) or a combination of the two. Oxidizers such as peroxide and hypochlorite can also be used to inactivate the enzyme. In the pulp and paper process, **FIBREZYME PBR 100** is inactivated in the dryers at the paper machine. No residual enzymatic activity will be found in the manufactured paper.

Packaging:

Standard package size for **FIBREZYME PBR 100** is 75 kilogram fiber drums.

Handling and Safety:

FIBREZYME PBR 100 can be an irritant to some individuals; avoid contact with skin and eyes. Take necessary precautions to avoid breathing dust. Refer to product MSDS for further safety information. Always close drum after opening.

Storage:

FibreZyme PBR 100 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. **FibreZyme PBR 100** also retains more than 90% activity after 1 month when stored at 38°C (100°F). Do not let freeze.

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.