olt *Innovations*

ProtobindTM 1000

Protobind[™] 1000 is a sulphur free aromatic biopolymer obtained from agricultural fibrous feedstocks.

Since the product is renewable, its production cost is to some extent independent from the price volatility of oil and as shown by EMPA (a well-known Swiss Institute) has a substantial potential to reduce greenhouse gas reduction.

TYPICAL END USES

- Antioxidant
- Board Binder (PF, UF, MF, RF, ...)
- Depolymerisation (Vanillin, ...)
- Tires

- Dispersant
- Emulsifier
- Plastics/Polymers (PU, Epoxy resins, ...)

TYPICAL PROPERTIES

% Solids> 95	% Solubility in water (acid or neutral) NIL
% Sulphur-free Lignin> 90	% Solubility in water (alkali) Very High
% Ash (800°C) < 3	% Solubility in Furfuryl alcoholVery High
pH (10% aq. Suspension)~3.5	% Solubility in DMFVery High
Softening Temperature °C 200	% Solubility in DMSOVery High
Number Avg. Molecular Wt. (Mn)750—1000	% Solubility in Ethy acetate Very High
Weight Avg. Molecular Wt. (Mw)2500—4000	Glass Transition Temperature, °C~150
Bulk Density, kg/L~0.3	Aliphatic OH content, mmol/g1.8—2.1
Particle Size Distribution (Dv50, μ m)~65	Phenolic OH content, mmol/g2.7—3.1
Particle Size Distribution (Dv90, μ m)~200	Acid OH content, mmol/g0—1.2
Specific surface Area, m ² /kg~700	

HANDLING

This product has to be used and disposed of according to the indications given in its safety data sheet.

STORAGE RECOMMENDATION

- Ensuring stock is kept at a moderate temperature (5 –30°C).
- Shelf life of min. 2 year if stored in a dry, cool area in its original closed packaging.

PACKAGING

1 kg—5 kg—20 kg (bags) 250 kg—350 kg— 700 kg (jumbo bags)

FOR MORE INFORMATION

Head office: Weingartenstrasse 11—8803 Rüschlikon—Switzerland— +41 41 509 98 86

R&D: Ducats 40a—1350 Orbe—Switzerland— +41 24 509 98 87