

XTREME 25
LOW INCLUSION FEED BINDER

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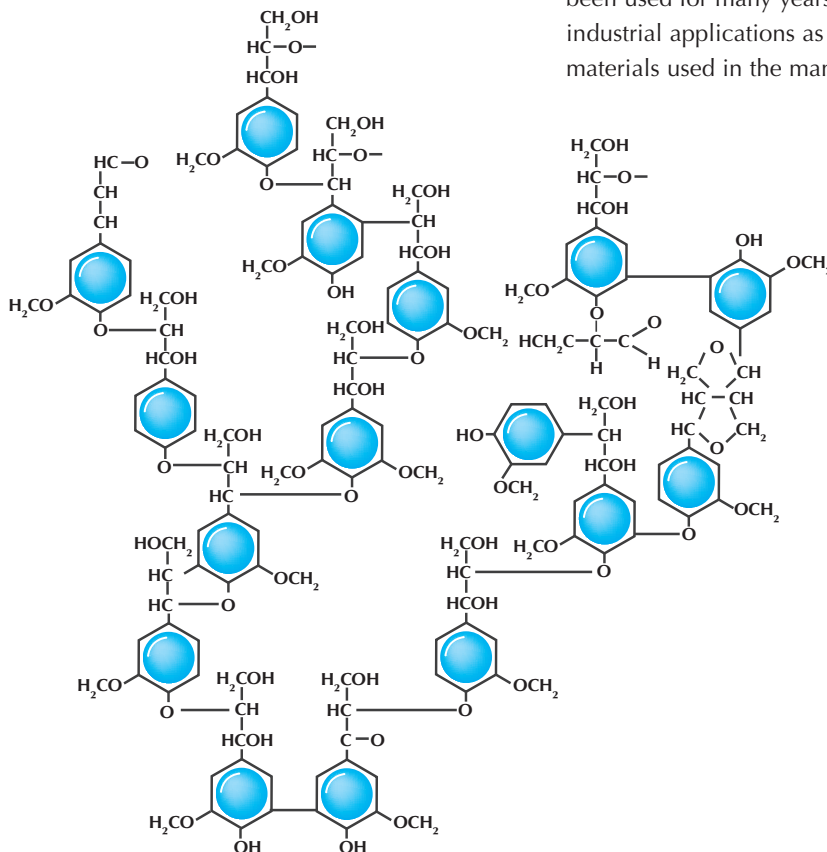
Borregaard has a long experience in the global supply of specially designed lignin products for the animal feed industry, as a result of our ongoing commitment to animal feed technology; we are pleased to introduce our newest innovative development:

“Xtreme 25” an EU approved technological feed additive.

Parameter	Value
Dry matter (%)	min 93
pH (10% solution)	5.0±0.5
Density (kg/m ³)	500

“Xtreme 25” is designed and produced from modified lignosulphonate specially selected for its low molecular weight. The unique processing and modification of this material, results in a product with sodium salts and a higher than normal level of carbohydrate and pH.

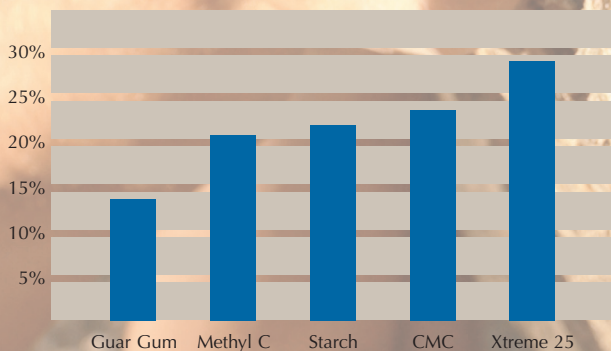
Lignin is a polymer containing phenylpropane units, in wood these form three dimensional network structures which chemically bind the cellulose and other carbohydrates together and is why lignosulphonate has been used for many years as a natural binder in many industrial applications as well as for use as a binder of raw materials used in the manufacture of pelleted animal feed.



“Xtreme 25” has been proven to exhibit superior binding characteristics compared to other commercial products.

Additionally in comparative trials (Figure 1) with other known low inclusion feed binder raw materials, such as guar gum, methyl cellulose, starch and carboxyl methyl cellulose, “Xtreme 25” was found to exhibit superior binding characteristics when used at the same inclusion.

Figure 1. Improvement over non use at 0.25% inclusion



The use of this low inclusion feed binder will improve pellet durability resulting in reduced fines whilst improving productivity, energy savings and pelleting process efficiency. The advantage of using a low inclusion feed binder in today's climate of high cost feed ingredients are:

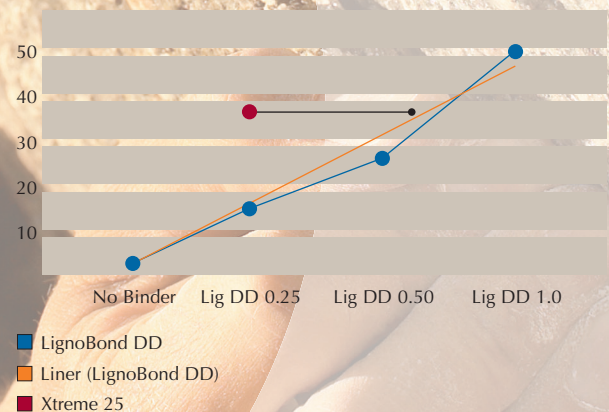
- To keep to a minimum the available space utilised for the addition of a technological additive used to improve the physical characteristic of high density feed rations.
- Thus allowing the nutrient requirements of the feed specification to be achieved, whilst presenting these to the animal in a dust free physical form.

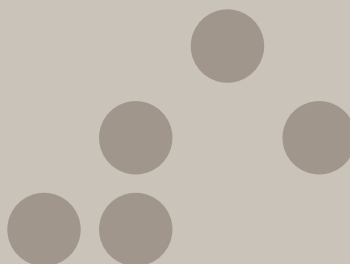
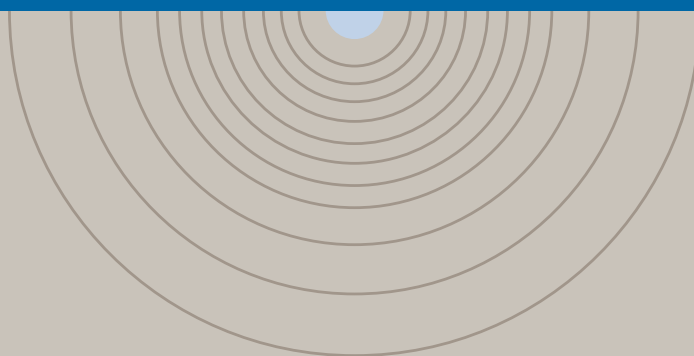
Benefits of using “XTREME 25”

- Improvement to durability (pdi)
- Reduction in fines (%)
- More productivity (t/Hr)
- Less energy used (kW)
- Improved process efficiency (kWh/T)
- Less space required in ration (kg/T)
- Savings in logistic and storage due to the lower dose (€£\$)
- Cost effective (€£\$)

In comparison to LignoBond DD a full bodied lignosulphonate feed binder, it can be seen from (Figure 2) the same effect in the reduction of fines can be achieved by using 2.5 kg/Mt (0.25%) of “Xtreme 25” than was achieved using 6 kg/Mt (0.6%) of LignoBond DD.

Figure 2.





Borregaard LignoTech
PO. Box 162, NO-1701 Sarpsborg, Norway
Tel: +47 69 11 80 00
Fax: +47 69 11 87 90

Email: feedtechnology@borregaard.com
www.borregaard.com

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