

FlourBond®
Binding nature
to energy



UNICORN
GRAIN SPECIALTIES

BETTER PELLETS, LOWER COSTS

The addition of FlourBond® creates a higher bond strength between the wood particles during the production process of the pellets and briquettes. The proportion of fines is reduced and does not need to be re-fed to the press. Thus, the throughput can be increased with constant power consumption or the power consumption drops at a constant throughput. Under these conditions, hardness and stability of the pellets, briquettes and thus the quality improve significantly.



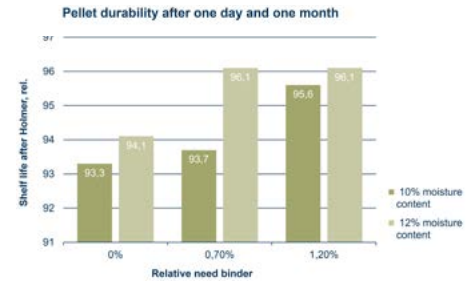
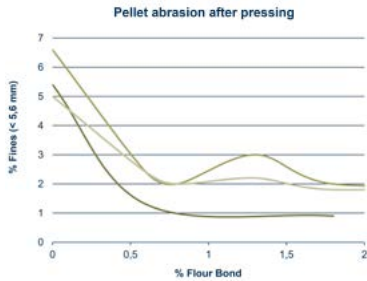
**More Energy through
higher adhesion**



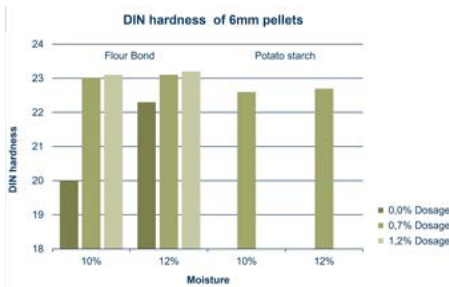
DURABILITY OF PELLETS – REDUCTION OF FINES

Due to the high mechanical loads during transport and use, abrasion and fines are one of the biggest problems in the use of wood pellets. Therefore, uniform standards and quality certificates (DINplus and ENplus) have been developed and introduced, which also determine the maximum proportion specify fines and abrasion and the mechanical strength. For industrial use, physical durability is an important requirement. When using FlourBond®, the proportion of fines and abrasion can be significantly reduced (more than 50%), as many internal and external tests show.

TEST RESULTS WITH FLOURBOND®



FlourBond® improves the pellet hardness by up to 15%. The optimal dosage of Flour Bond is between 0.5 and 2.0%. A higher addition has no further effects on the hardness of the pellets.

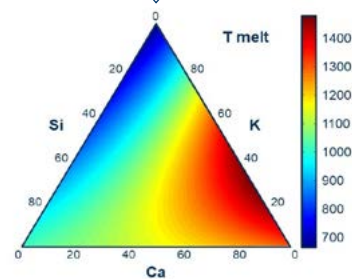


ASH MELTING BEHAVIOR

(LITERATURE AND UNICORN GRAIN SPECIALTIES / MENEBA INVESTIGATION 2008-2011)

ASH MELTING BEHAVIOR

Depending on the type of wood used, the use of FlourBond® will change the calcium-potassium ratio. This has demonstrably no negative influence on the ash melting temperature and thus on slagging in the heating system. The product FlourBond®-O also has a very low ash content.



ENPLUS AND DIN REQUIREMENTS

FlourBond® products are natural additives derived from cereal flour from agriculture and meet all the requirements of the quality certificate ENplus.



WHY USE FLOURBOND®?

- Highest binding properties
- Can be used in pellets and briquettes
- Harder pellets
- Longer shelf life of wood pellets and briquettes
- Less abrasion, less dust
- Higher production yield
- Lower energy consumption
- Completely replaces binders such as starch or other flour
- Reduces the wear of the dies
- Allows the use of different types of sawdust

FlourBond® is a Unicorn-developed pressing aid used in the production of wood pellets and briquettes. Depending on the manufacturing process, it can be added to the sawdust in a dosage between 0.5 and 2%. The addition of FlourBond® enhances binding between the wood particles, increases yield and the quality, and significantly reduces manufacturing costs. These advantages are confirmed by practical tests.



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