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Technical Data Sheet (TDS)

BENTO-01

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Natural additive BENTO-01 for oils prepared from nano-dispersed particles of the bentonite clay with size 16-60nm in linseed oil.

As high content Montmorillonite $Al_2[Si_4O_{10}](OH)_2 \cdot nH_2O$ in bentonite clay it has wireframe structure - typical for aluminum silicates which strengthen the coating after painted the surface. Bentonite creates gelatinizing matter in oil and it doesn't change appearance of a painted surface.

Nano dispersed bentonite particles have exceeding specific surface and it allows cover wide area by small concentration of this additive with continuous water resistant and ultraviolet radiation protected layer in oil after brushing or spraying.

Bento -01 allows improve water resistant of the painted surfaces not less than 3 times when long-term exposure of a moisture. For example in 24 hours after painted with natural oil the water drop wetting angles both coatings with BENTO-01 additive and check sample (without BENTO-01) was same. However in 5 hours check sample losses water resistant property but coating with Bento -01 keeps about same good level water resistant (wetting angle decreased only on 10%).

Tested samples in month after painted show same picture as before: check sample lost water resistant property in 48 hours but coating with BENTO-01 keeps same water resistant property.

Testing for UV protection of the oil painted surfaces was by screening part of area during in 30 calendar days. Without screening part loses color compare with screening part in check sample. However both parts area of the sample contented BENTO -1 have same color.

Due to frame structure of bentonite in mixture hardness of the coatings are increasing. The presence of ions of metals in bentonite such as Mg(II) and Na(I) reduces accumulating of static electricity in painted coating. These two factors don't allow accumulating dust and dirt in surfaces. It is substantially important for outdoor surfaces.

BENTO-01 is ready to use gel of a nano bentonite in linseed oil.

Range of application: additive for natural oils, natural drying oil, mixtures from them, mixtures with natural tars, mixtures with natural oil systems included pigments.

Dosage: add BENTO-01 in oil base mixture before other components without heating and under middle agitation (500-700 prm) during 20 min. Diapason of an additive concentration is from 2% to 4 % (by weight) to oil base.

Storage: recommended storage condition is same as for linseed oil.

Useful time: 1 year from manufactured date.