

Mowital® BA

Technical Data Sheet

Characteristics

Mowital® BA grades belong to the group of polyvinyl acetals. The properties of **Mowital® BA** grades are mainly determined by the presence of acetal, hydroxyl and acetate groups. The combination of two aldehydes leads to other properties, e.g. a change of the glass transition temperature.

Recommended uses

Mowital® BA grades are used as binder for printing inks, pigment preparations, pigment chips; Binder for coatings (adhesion promotion / corrosion protection primers).

Form supplied

Fine-grained and free-flowing white powder.

Specification data

The data are determined by our quality control for each lot prior to release.

	Non-volatile content ¹	Content of polyvinyl alcohol ²	Content of polyvinyl acetate ³	Dynamic viscosity ^{4,5}
	wt-%	wt-%	wt-%	mPa · s
Mowital® BA 20 S	≥ 97,5	14–18	1–4	24–30
Mowital® BA 55 HH	≥ 97,5	11–14	1–4	160–220

1) Kuraray method ref. DIN EN ISO 3251:2019-09

2) Kuraray method ref. DIN EN ISO 4629-1:2016-12

3) Kuraray method ref. DIN EN ISO 3681:2019-03

4) Kuraray method ref. DIN 53015:2019-06, at 20 °C

5) as 10 % solution in ethanol containing 5 % H₂O

Additional data

These data are used solely to describe the product. They are not subject to constant monitoring or part of the specification.

Glass transition temperature

The glass transition temperature is determined according to the following standard: DIN EN ISO 11357-1:2017-02. The **Mowital® BA** grades have average values in a range of 84–93 °C.

Moisture absorption

Moisture absorption is determined according to the Kuraray method following standard: DIN EN ISO 3251:2019-09. When applying the standard climate (23 °C / 50 % r. h.), the **Mowital® BA** grades show average values in a range of 0,5–1,5 %.

Bulk density

The bulk density is determined according to the Kuraray method, which refers to DIN EN 543:2003-08. The **Mowital® BA** grades have average values in a range of 200–350 g/l.

Nomenclature

The tradename **Mowital®** is followed by the capitals BA stating the aldehyde used: B is standing for butyraldehyde and A for acetaldehyde. The numbers refer to the degree of polymerisation, the higher the number the higher the degree of polymerisation (viscosity). The suffixes S and HH indicate the degree of acetalisation, S being the lower and HH the higher acetalisation degree.

PROPERTIES AND USES

Mowital® BA grades vary in properties based on the degree of acetalisation as well as molecular weight and show excellent solubility in a variety of organic solvents. **Mowital**® BA grades show good compatibility with suitable plasticisers and various polymers. Furthermore, they are able to cross-link with other resins such as phenolic, epoxy and melamine resins.

Processing

Mowital® BA grades can be processed and applied by the usual equipment of the printing ink and lacquer industry.

Applications

Preferred solvents for **Mowital**® BA grades are alcohols such as ethanol, isopropanol, n-butanol or diacetone alcohol. In printing ink applications commonly ethanol is used. The grades are also well-soluble in esters, such as e. g. methyl acetate, ethyl acetate and n-butyl acetate.

Mowital® is not soluble in water. However, a water content of up to 10 % in the solvent mixture is possible and can be used to influence solution viscosity. Increase or decrease of viscosity depends on the type of solvents (e.g. increase in ethanolic solution) and must be tested in advance.

Due to its good flow properties and excellent pigment wetting, **Mowital**® BA grades are well-suited for the production of pigment concentrates and preparations (pigment chips).

The adhesion to organic and inorganic substrates, e. g. based on cellulose acetate, polyethylene, polypropylene, polystyrene, polyester – eventually surface treated – and aluminium are good. If necessary, the adhesion properties to difficult substrates, such as e. g. surface-treated OPP-films with homopolymer or ethylene-propylene-copolymer surface layers, can be improved by addition of an adhesion-promoter.

Mowital® BA grades are used to manufacture shop and wash primers (1K and 2K primers). The films adhere extremely well to steel, iron, zinc, aluminum and other metals.

To achieve further improvement in anti-corrosion protection as well as adhesion **Mowital**® BA can be combined with low-molecular weight phenolic, epoxy or melamine resins.

The good anchorage of the primer on metal is caused by a binder / pigment / orthophosphoric acid / metal complex.

Besides binders for printing inks, **Mowital**® BA grades also can be used advantageously for applications where low melt viscosity or an increased solid content along with high wetting affinity to pigments / fillers are required.

Storage

Mowital® BA grades can be stored in its original packaging under dry and cool conditions for at least 12 months after delivery date.

Precautions

Static electricity has to be avoided applying the appropriate safety measures while handling **Mowital**® as well as organic solvents.

Industrial safety and environmental protection

Not classified as a dangerous substance or preparation according to the current criteria of chemical legislation, or of the CLP regulation EU Directives (1272/2008).

A safety data sheet is available on our homepage www.mowital.com and is updated on a regular base.

Waste disposal

In accordance with current regulations and/or after consultation with site operator and/or with the responsible authorities **Mowital**® may be taken to waste disposal sites or incineration plants.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is subject to our General Conditions of Sale. June 2022

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