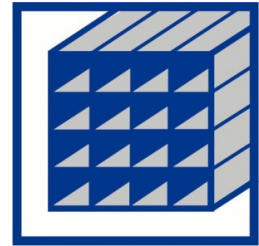


Dispersants and binders for aqueous tape casting



DOLACOL D DOLACOL B

Dispersants and binders for aqueous tape casting offer producers of ceramic tapes an **alternative system** to the solvent process. Production of many materials can be transferred to an aqueous system. Above all this is of interest for reworking, or broadening the scope of production systems, leading to the **potential for large savings** in comparison to the use of conventional systems.

The **preparation** system is analogous to that of organic solvents. Initially the ceramic powder is dispersed into water plus dispersant in a mill, following which, the binder is stirred in homogeneously. The slip is then usually ready, but should normally be de-aerated before use.

The Zschimmer & Schwarz tape casting binders are multi component systems. These are designed so the user has no need for other additives. Because of this feature, a **flexible green tape** results simply from the addition of the binder; hence the use of softeners is not necessary.

Also an **optimal slip viscosity** is obtained, as well as a **good wetting of the cast base**. In order to ensure a fast drying time, the binders are available in a highly concentrated form.

The dried tapes are no longer water-soluble, thereby ensuring the stability of the green tape during storage.



Deflocculants for aqueous tape casting

PRODUCT	Properties		Application									
	Active matter [%]	Chemical basis	Addition quantity [%]	Ethanol	MEK	Toluol	Tri	Water	Al ₂ O ₃	ZrO ₂	BaTiO ₃	SiC
DOLACOL D 1001	100	Alkylphosphate	0,5 - 2,0	●	●	●	●	●	✓ ✓	✓ ✓	✓ ✓	✓
DOLACOL D 2006	~ 25	Polycarboxylate	0,2 - 1,0	-	-	-	-	●	✓ ✓	✓ ✓	✓ ✓	✓

- ✓ can be used as alternative
- ✓ ✓ especially suitable
- usable
- not usable

PRODUCT	Properties					Application					Annotation
	Active matter [%]	Chemical basis	Stabilization	pH	Viscosity [mPa·s]	Addition quantity [%]	Al ₂ O ₃	ZrO ₂	BaTiO ₃	SiC	
DOLACOL B 4006	~ 62	Acrylate	Emulsifier	7,5 -9,5	~ 2500	18 - 30	✓	✓	✓ ✓	✓	universal binder
DOLACOL B 4011	~ 43	Modified acrylate	Emulsifier	6 - 8	~ 300	18 - 30	✓	✓ ✓	✓ ✓	✓	high green strength, slight foaming

- ✓ can be used as alternative
- ✓ especially suitable
- usable
- not usable