Functionalized Polyurethane Resin

Application

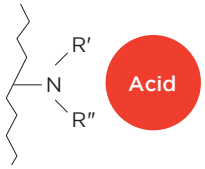
•Widely applicable and developable upon request with our technology, and the examples as follows ;
・ Binder for magnetic tape, polishing tape, making film and recording media
•Resin for crosslinking
•Resin for UV/electron beam curing, thermosetting

Characteristics

•A polymer provided with a specialized function by introducing a polar group into a molecular structure
•Capable of designing/developing various polyurethane resins with our synthesis technology, such as for dispersibility development of various fillers including polishing material, and pigments
•Capable of improving abrasion-resistance/adhesion, and crosslinking density by using a functional group
•Capable of producing coatings in a short time, and selecting functional groups according to the surface nature of dispersion
•Capable of blending with any binder, such as vinyl chloride-vinyl acetate and nitrocellulose

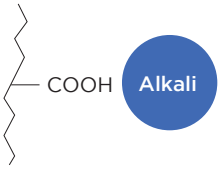
Application example : Dispersing agent

For dispersing acidic materials



Introduced amino group

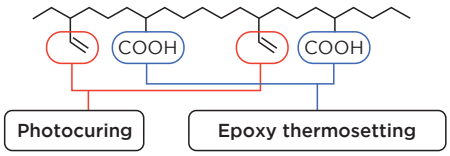
For dispersing alkaline materials



Introduced carboxyl group

Application example : Crosslinkage

Multi-functional type (Photo resist)



Main chain: Urethane

Thermosetting type

Main chain: Urethane

Representative Products

Product name	Solid content (%)	Solvent	Molecular weight(Mn)	Functional group	100% Mod. (MPa)	Breaking strength (MPa)	Breaking elongation (%)	Thermal softening point(℃)	Note
MAU-5000	30	TOL/IPA	40,000	Carboxyl	5.5	60	400	130	Non-yellowing
MAU-5022	35	MEK/TOL	15,000	Carboxyl	1.3	17	690	65	Yellowing
MAU-8288	35	CYCL	20,000	(urethane)	12	58	370	90	Non-yellowing
MAU-9022	30	MEK/CYCL	40,000	(urethane)	2.7	60	400	95	Yellowing

TOL= toluene, CYCL=Cyclohexanone
The values shown above are typical values, not standard values.