Winsin Materials , Inc.
2-701 No.3 B1 HAO
Science Park Foshan City
528200 CHINA
www.winsinmaterials.com

Technical Information

ALFONSO® UC-368

polyurethane elastomer

ALFONSO® UC-368 is a polyurethane prepolymer based on TDI-PTMEG system with outstanding elasticity and hydrolysis resistance, but It also exhibits remarkable oil resistance and performance at low temperature. The good flowability and long pot life of UC-368 enable it to restore every tiny detail on the mould. The unique properties enable users to make large products with this prepolymer and suggest the applications in rail equipment parts, pipe lining and mining equipment parts.

ALFONSO®UC-368 Prepolymer Characteristics

Property	Unit	Value
NCO	%	3.65±0.1
Viscosity at 70℃	Mpa.s	1050±50
Viscosity at 30℃	Mpa.s	3700±50
Specific Gravity at 25℃	cm^3	1.05
Operating Temperature	℃	80±5
Pot Life	min	12-14
Demould at	min/℃	30/100
Post Cure	Hour/℃	16/100

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Curative Info

Type	Mixing Temperature	Mixing Ratio A:B
MBCA	120℃	100：10
Ethacure 300	40℃	100：8.0

ALFONSO® UC-368 Physical Properties

Property	Unit	Value	Standard
Durometer Hardness	Shore A	84±2	DIN 53505
100% Modulus	N/mm^2	5.5	DIN 53504
300% Modulus	N/mm^2	8.0	DIN 53504
Elongation at break	%	550	DIN 53504
Tensile Strength	N/mm^2	30	DIN 53504
70℃/24h,20% Compression Set	%	30	DIN 53517
Tear Strength	N/mm^2	80	DIN 53515
Rebound Resilience	%	55	DIN 53512
Abrasion	mm^3	35	DIN 53516
Cured Density	g/cm^3	1.08	DIN 53479

*Values shown above are acquired from samples prepared only for testing purposes.

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Notice

Storage & Handling

ALFONSO® UC-368 prepolymer should be stored in cool, well ventilated and rainproof environments. High storage temperature may reduce its shelf life.

When exposed to the air, certain reactions may occur and this can be harmful to the prepolymer. If a barrel is not consumed up at a time, the barrel with remained prepolymers should be sealed with care and it's recommended to fill the barrel with dry nitrogen for protection.

The prepolymer will increase in viscosity and eventually solidify at low temperature, and need heating to be poured out from the barrel. It is not recommended to heat the barrel with electric heating bars or electric hot plates because these equipment may cause uneven heating on some spots thus lead to material decomposition in these spots. Recommended temperature for melting UC-368 is 70℃.

The prepolymer will only be ready for curing when it's completely melted and heated to reaction temperature, because solid phase of the prepolymer can cause undermixing with curatives and results in flaws in the finished products.

Health Hazard

ALFONSO® UC-368 contains a small amount of free toluene diisocyanate (TDI) which is a known hazardous substance and may cause severe irritation to the eyes, skin and mucous membranes. Operate only with proper ventilation to avoid inhalation of vapor. Avoid contact with eyes, skin and clothing and wash thoroughly after handling. For further information, please refer to the Material Safety Data Sheet (MSDS).