Prepolymer HC-2290ABC

1.Characters: Based on MDI caprolactone type high-performance polyurethane prepolymer. The products have the advantages of good wear resistance, small internal heat generation, good tensile tear performance and high resilience.

2.Applications: It is mainly used for the production of polyurethane elastomer products with wear resistance, tensile and tear resistance and rebound requirements, such as screen, scraper, wheel, cotton picking plate, etc.

3.Typical Properties:

Name / Item	Appearanc（25℃）	Viscosity under processing	NCO (NCO%)	specific gravity (g/cm^3)	Shelf life (month)
HC-2290B	Viscous transparent liquid	500/50℃	16.5±0.5	1.19	6
HC-2290A	White solid	800/60℃	-	1.16	6
HC-2290C	Transparent liquid	20/30℃	-	1.01	6

4. Casting Processing Way:

Hardness		60A	65A	70A	75A	80A	85A	90A	95A	55D
POL component	HC-2290A	220	180	155	135	110	90	70	50	30
ISO ccomponent	HC-2290B	100	100	100	100	100	100	100	100	100
Chain extender	HC-2290C	6.8	8.3	9.5	10.8	12	13.2	14	15	15.8
A Processing temp.	℃	50~70								
B Processing temp.	℃	40~50								
C Processing temp.	℃	20~35								
Pot life	min	5	5	5	5	4.5	4-4.5	3.5-4	3.5	3
Mold temp.	℃	80-100								
Demold time	min	30	30	30	30	30	30	30	30	45
Cure condition	℃/h	100℃/14-18								

Processing way：

Name / Item	Pre-heat temp.（℃）	Pre-heat time（hours）	Degassing	Storage
HC-2290B	50/80	12/5	YES	Nitrogen
HC-2290A	80	12	YES	Nitrogen
HC-2290C	40/25	6	YES	Nitrogen

Note: 1. Preheating temperature should not be too high, too long, avoid local overheating, shake well before use;

2.The gel time is based on the manual mixing and stirring of 200g raw materials. The mixing speed of the machine is about 1 minute. The curing of the hot mold is also rapid. Please confirm the speed.

5. Physical indicators

Item	Testing standard	Unit	60A	65A	70A	75A	80A	85A	90A	95A	55D
Hardness(25℃)	GB/T531.1-2008	Shore A	60A	65A	70A	75A	80A	85A	90A	95A	55D
100% Modulus	GB/T 528-2009	MPa	2.4	3.1	4.0	4.6	4.9	6	8.2	11.2	15.5
300% Modulus	GB/T 528-2009	MPa	5.6	6.1	8.6	9.7	10.1	11.3	16.4	17.8	17.9
Strength at break	GB/T 528-2009	MPa	25	30	33	39	45	50	52	51	45
Elongation at break	GB/T 528-2009	%	700	650	620	580	565	550	535	500	480
Tear strength	GB/T 529-2008	KN/m	56	62	69	78	86	102	106	117	132
Resilience	GB/T 1681-2009	%	56	56	56	55	54	52	50	48	44
DIN Abration	GB/T 9867-2008	mm^3	37	38	37	36	34	34	35	32	30
Compression deformation	GB/T 7759.1-2015	%	36	35	35	30	32	28	23	27	32
Relative density	GB/T 533-2008	g/cm^3	1.15	1.15	1.15	1.15	1.16	1.16	1.17	1.17	1.18

6.Notes：

1) Prepolymer, chain extender, and polyol will crystallize at low temperature. Please warm at 70 °C until completely melted. Shake well before use.

2) Increasing the curing speed and demolding time can be achieved by adding a catalyst, and the catalyst should be added to the polyol component.

3) Prepolymer should be stored at low temperature and dry place, avoid moisture and water when using.

4) Use as soon as possible after opening the drum. Fill in Nitrogen to seal if it can not be used up.

5) Shelf life is 6 months for unopened drum.

6) If color paste or other additives are needed, they can be added in component A, but be sure, moisture content of the additives should be under 0.1%.