Arkema **Pebax® MED**

NCC provides a comprehensive range of technical polymer, and additive materials for supply to the medical device and healthcare sectors. As part of our portfolio of products, we offer the full range of Arkema medical polymers, including Pebax®.

Medical grades Pebax® polyether block amide are plasticiser-free thermoplastic elastomers with a wide range of physical and mechanical properties achieved by varying the monomeric block types and ratios.

Grades within the product range extend from soft and flexible products similar to elastomers, to those with mechanical properties approaching polyamides.

The remarkable processing ease of medical grade Pebax® elastomers makes it an excellent choice for extrusion of medical grade tubing or film applications and injection moulding.

Key properties:

- Certifications - USP Class VI, - ISO 10993-4, - ISO 10993-5
- Bondable by adhesives or RF welding
- Easily blended with other polymers and compounded with additives
- High torque transference and kink resistance
- Excellent impact resistance and low rigidification at low temperature
- Consistent durometer and flexibility at room and body temperatures
- Good resistance to most chemicals
- Pebax® MV 1074 SA 01 MED: hydrophilic grade with antistatic properties (surface resistivity 3.109 Ω / sq.)

NCC MEDICAL & HEALTHCARE POLYMER SOLUTIONS

ARKEMA INNOVATIVE CHEMISTRY

PEBAX® MED BY ARKEMA

				MEDICAL GRADE RANGE									
				PEBAX®									
PROPERTIES	DESCRIPTION	TEST METHOD	UNITS	MV 1074 SA 01 MED	2533 SA 01 MED	3533 SA 01 MED	4033 SA 01 MED	4533 SA 01 MED	5533 SA 01 MED	6333 SA 01 MED	7033 SA 01 MED	7233 SA 01 MED	7433 SA 01 MED
PROPERTIES		ISO 1183	g / cm3	1.07	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01
WATER ABSORPTION	@20° C, 50 % RH	ISO 62	%	1.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	-
	@23° C, 24 hrs in water	ISO 62	%	48	1.2	1.2	1.2	1.2	1.2	1.1	1.1	0.9	-
MELTING POINT		ISO 11357	° C	158	134	144	160	147	159	169	172	174	174
VICAT POINT	Under 1 daN	ISO 306	° C	-	58	77	131	111	142	157	164	164	-
SHRINKAGE	Flow direction, after 24 hr, 4 mm, mould at 20° C	Internal Method	%	-	0.5	0.5	0.4	0.4	1.2	1.2	1.2	1.2	0.2+++
	Transverse direction, after 24 hrs, 4 mm, mould at 20° C	Internal Method	%	-	0.8	0.8	1.1	1.1	1.4	1.4	1.5	1.5	0.7+++
HARDNESS SHORE +	Instantaneous	ISO 868	Shore D	40	27	33	42	46	54	64	69	69	73
	After 15 sec	ISO 868	Shore D	-	22	25	35	41	50	58	61	61	66
TENSILE TEST +	Stress at Break	ISO 527	MPa	30	32	39	40	42	52	53	54	56	46
	Stress at Break	ISO 527	%	> 700	> 750	> 600	> 450	> 550	> 450	> 350	> 350	> 300	> 250
FLEXURAL MODULUS +		ISO 178	MPa	80	12	21	77	86	170	285	390	510	610
CHARPY IMPACT	Unnotched 23° C	ISO 179	kJ / m²	-	NB	NB	NB	NB	NB	NB	NB	NB	NB
	Unnotched -30° C	ISO 179	kJ / m2	-	NB	NB	NB	NB	NB	NB	NB	NB	NB
	V-notched 23° C	ISO 179	kJ / m2	-	NB	NB	NB	NB	NB	NB	120 (p)	15 (c)	19 (c)
	V-notched -30° C	ISO 179	kJ / m2	-	NB	NB	NB	NB	NB	20 (c)	20 (c)	10 (c)	6 (c)

+ Samples conditioned 15 days at 23° C, 50 % RH. ++ Pebax® is delivered dried in sealed packaging ready to be processed. Drying is only necessary for bags opened for more than 2 hours. +++ mould at 40° C.
(c) Complete break. (p) Partial break.

PROCESSING			MV 1074 SA 01 MED	2533 SA 01 MED	3533 SA 01 MED	4033 SA 01 MED	4533 SA 01 MED	5533 SA 01 MED	6333 SA 01 MED	7033 SA 01 MED	7233 SA 01 MED	7433 SA 01 MED
DRYING++	Time	hrs	4 – 6	4 – 8	4 – 8	4 – 8	4 – 8	4 – 6	4 – 6	5 – 7	5 – 7	5 – 7
	Temperature	° C	65 – 75	55 – 65	55 – 65	60 – 70	60 – 70	65 – 75	65 – 75	70 – 80	70 – 80	70 – 80
EXTRUSION TEMPERATURE	Minimum	° C	210	190	190	210	210	210	210	220	220	220
	Recommended	° C	220	205	205	220	220	220	225	235	235	235
	Maximum	° C	230	220	220	230	230	230	240	250	250	250
INJECTION TEMPERATURE	Minimum	° C	200	180	180	200	200	200	230	230	230	230
	Recommended	° C	240	210	210	240	240	240	260	260	260	260
	Maximum	° C	270	240	240	270	270	270	290	290	290	290
MOULD TEMPERATURE	Typical	° C	25 – 60	10 – 30	10 – 30	10 – 30	10 – 30	25 – 60	25 – 60	25 – 60	25 – 60	25 – 60

For further information contact us or visit ncc.ie.

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