LNP™ THERMOCOMP™ Compound 2X04505

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound PDX-FP-E-04505
Product reorder name: 2X04505

LNP THERMOCOMP 2X04505 is a compound based on ETFE resin containing Proprietary Filler(s).

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yield	890	kgf/cm²	ASTM D 638
Tensile Stress, break	870	kgf/cm²	ASTM D 638
Tensile Stress, yld, Type I, 5 mm/min	890	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	870	kgf/cm²	ASTM D 638
Tensile Strain, yield	4.5	%	ASTM D 638
Tensile Strain, break	4.8	%	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	4.8	%	ASTM D 638
Tensile Modulus, 50 mm/min	154600	kgf/cm²	ASTM D 638
Flexural Modulus	105400	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	105400	kgf/cm²	ASTM D 790
Tensile Stress, yield	89	MPa	ISO 527
Tensile Stress, break	88	MPa	ISO 527
Tensile Strain, yield	4.6	%	ISO 527
Tensile Strain, break	4.9	%	ISO 527
Tensile Modulus, 1 mm/min	11580	MPa	ISO 527
Flexural Stress	319	MPa	ISO 178
Flexural Modulus	18800	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	105	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	27	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	191	cm-kgf	ASTM D 3763

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.
(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
IMPACT			
Multiaxial Impact	90	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	58	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	23	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	255	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	222	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.74E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.26E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.2E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	251	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	207	°C	ISO 75/Af
PHYSICAL			
Density	1.75	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	1 - 1.2	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.8 - 2	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	1.1	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.9	%	ISO 294
Density	1.74	g/cm³	ISO 1183

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4	hrs
Melt Temperature	315	°C
Front - Zone 3 Temperature	330 - 345	°C
Middle - Zone 2 Temperature	310 - 320	°C
Rear - Zone 1 Temperature	280 - 295	°C
Mold Temperature	95 - 120	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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