

## LNP\* Lubricomp\* Compound KZL34

### Americas: COMMERCIAL

Also known as: LNP\* Lubricomp\* Compound KFL-4034 M

Product reorder name: KZL34

LNP\* Lubricomp\* KZL34 is a compound based on Acetal resin containing Milled Glass and PTFE. Characteristic of this grade is Internally Lubricated.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	380	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	360	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	8	%	ASTM D 638
Tensile Modulus, 5 mm/min	34200	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	730	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	29600	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 5 mm/min	37	MPa	ISO 527
Tensile Stress, break, 5 mm/min	34	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.5	%	ISO 527
Tensile Strain, break, 5 mm/min	7	%	ISO 527
Tensile Modulus, 1 mm/min	3220	MPa	ISO 527
Flexural Stress	64	MPa	ISO 178
Flexural Modulus, 2 mm/min	2960	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	35	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Multiaxial Impact	20	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	40	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	19	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	147	°C	ASTM D 648

(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±176.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.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D 648
CTE, -30°C to 30°C, flow	8.7E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	9.1E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.6	-	ASTM D 792
Density	1.65	g/cm <sup>3</sup>	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.14	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955
Wear Factor Washer	160	10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr	ASTM D 3702 Modified
Wear Factor Ring	5	10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.43	-	ASTM D 3702 Modified
Static COF	0.49	-	ASTM D 3702 Modified
Moisture Absorption (23°C / 50% RH)	0.22	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	65 - 75	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	220 - 250	°C
Nozzle Temperature	220 - 250	°C
Front - Zone 3 Temperature	220 - 250	°C
Middle - Zone 2 Temperature	210 - 240	°C
Rear - Zone 1 Temperature	180 - 220	°C
Mold Temperature	40 - 60	°C
Back Pressure	3 - 10	MPa
Screw Speed	30 - 80	rpm
Shot to Cylinder Size	30 - 70	%
Vent Depth	0.03 - 0.05	mm

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