

# VESTAMID® L compounds and their applications

## Characterization of the most important products and their typical applications

### Unfilled polyamid 12 compounds

VESTAMID®	Description acc. to ISO 1874-1	Characterization	Processing	Tensile modulus [MPa]	Applications
L1600	PA12, XN, 12-010	low viscosity base polymer	I, E, C	1300	additive batches for coloring and stabilization, processing aid
L1700	PA12, XN, 14-010	low viscosity base polymer	I, E, C	1300	as L1600
L1901	PA12, XN, 18-010	medium viscosity base polymer	I, E, C	1300	as L1600
L1670	PA12, KHL, 12-010	low viscosity, heat and light stabilized, with processing aid	I, E	1400	wire insulation, coils, secondary coating of optical fibers
X7377 black	PA12, HHL, 12-020	low viscosity, heat and light stabilized, with adhesion promoter	E	1650	extrusion coating of metal tubing
L1940	PA12, KH, 18-010	medium viscosity, heat stab., with proc.aid	I, E	1400	loose tubing for optical fibers, sheathing for steel wire cables
X7373	PA12, MHR, 18-010N	medium viscosity, heat stab., nucleated for very short cycle time	I	1500	filter and valve housings, bushings, connectors
L1950 black	PA12, MHS, 18-020	medium viscosity, heat stab., red. friction and wear through molybdenum disulfide mod.	E	1550	Guide rails, slip bushings
L2101F	PA12, F, 22-010	high viscosity, steam sterilizable	E	1400	Packaging films, catheters
L2106F	Nicht anwendbar	high viscos, improved transparency, mod. by co-monomers	E	1300	flexible tubular films for sausage casings
L2140*	PA12, EHL, 22-010	high viscosity, heat and light stab., with processing aid	E	1400	fuel lines, sheathing for steel cables, semi-finished articles, tubing for car window lifts
L2170	PA12, EHL, 22-010	high viscosity, heat and highly light stab., with processing aid	E	1400	UV-stable and termite-resistant cable sheathing
L2141 black	PA12, EHL, 22-010	high viscosity, light and higher heat stab. than L2140, with proc. aid	E	1500	Hydraulic clutch lines, vacuum lines
LX9008	PA12, EHL, 22-010	high viscosity, highly heat stabilized	E	1450	diesel fuel lines
LX9012	PA12, EHL, 22-010	high viscosity, heat and light stabilized	I, E	1100	transparent sport shoe soles, ski cover films

\*VESTAMID® L2140B for use in food contact upon request; C = Compounding; E = Extrusion ; I = Injection molding

## Plasticized polyamide 12 compounds

VESTAMID®	Description acc. to ISO 1874-1	Characterization	Processing	Tensile modulus [MPa]	Applications
L1723	PA12-P, MHL, 14-004	low viscosity, plasticized, heat-stabilized, with mold release	I	450	cable ties, fastening elements
L2121	PA12-P, EHL, 22-007	high viscosity, plasticized, light- and heat-stabilized, with processing aid	E	700	fuel, vacuum, and hydraulic clutch lines, steel cable sheathing
L2122	PA12-P, EHL, 22-005	high viscosity, plasticized, light- and heat-stabilized, with processing aid	E	490	fuel, vacuum, and hydraulic clutch lines, steel cable sheathing
X7393	PA12-HIP, EHL, 22-005	high viscosity, plasticized, light- and heat-stabilized	E	570	air brake tubing, for higher working pressure
L2124	PA12-P, EHL, 22-004	high viscosity, plasticized, light- and heat-stabilized, with processing aid	E	400	fuel, vacuum, and hydraulic clutch lines, steel cable sheathing
L2123	PA12-P, EHL, 22-004	high viscosity, plasticized, light- and heat-stabilized, with processing aid, increased cold impact strength	E	370	air brake line systems
X7293	PA12-HIP, EHL, 22-004	high viscosity, plasticized, light- and heat-stabilized, with processing aid, increased cold impact strength	E	400	air brake line systems
L2128	PA12-P, EHL, 22-002	high viscosity, plasticized, light- and heat-stabilized, with processing aid	I, E	230	very flexible tubing and hose for pneumatic systems
LX9013	PA12-HIP, EHL, 22-004	high viscosity, plasticized, highly heat-stabilized	E	400	diesel fuel lines
LX9018	PA12-P, MHL, 14-005	low viscosity, plasticized, heat-stabilized, with mold release	I	530	cable ties, fastening elements

E = Extrusion  
I = Injection molding

## Reinforced, filled and flame retardant containing polyamide 12 compounds

VESTAMID®	Description acc. to ISO 1874-1	Characterization	Processing	Tensile modulus [MPa]	Applications
L-GF15	PA12, MHR, 16-050, GF15	15% chopped strands, medium viscosity, heat stabilized, with proc. aid I	I	3900	gear box housing for electrical car window lifts
L1833	PA12, MHR, 16-050, GF23	23% chopped strands, medium viscosity, heat stabilized, with proc. aid	I	5000	quick connectors for fuel lines
L-GF30	PA12, MHR, 18-070, GF30	30% chopped strands, medium viscosity, heat stabilized, with proc. aid	I	6500	Bearing cups for windshield wipers
L1930	PA12, MHR, 18-040, GD30	30% milled glass fibers, medium viscosity, heat stabilized, with proc. aid	I	4000	Gear wheels, castors, pump parts, sliding bearings, fittings
L-GB30	PA12, MHR, 16-020, GB30	30% glass microbeads, medium viscosity, heat stabilized, with proc. aid	I	2000	precision-molded parts with isotropic shrinkage, e.g., housings for gears, control valves and mechanical counters, pump impellers
X7166	PA12, KFH, 12-020	low viscosity, with flame retardant, halogen- and phosphorus-free, UL94-V0/V2, with proc. aid	I, E	1800	wire insulation
X7167	PA12, EFH, 22-020	high viscosity, with flame retardant, halogen- and phosphorus-free, UL94-V0/V2, with proc. aid	E	1700	profiles for aircraft interiors
X7229	PA12-P, EFH, 22-010	high viscosity, plasticized, with flame retardant, halogen- and phosphorus-free, UL94-V2, meets FAR 25.853b	E	1000	profiles and tubing
LX9104	PA12-HIP, EFH, 22-010	high viscosity, plasticized, with flame retardant, halogen-free, UL94-V0, increased cold impact strength	E	800	profiles and (corrugated) tubing

E = Extrusion  
I = Injection molding

## Permanently antistatic and electrically conductive polyamide 12 compounds

VESTAMID®	Description acc. to ISO 1874-1	Characterization	Processing	Tensile modulus [MPa]	Insulation resistivity [Ohm]*	Applications
L-R3-MHI black	PA12-HI, MHZ, 16-020	medium viscosity, heat- and light-stabilized, with processing aid, increased cold impact strength	I	1600	10 <sup>4</sup>	antistatic and electrically conductive moldings or extrudates for use in areas prone to explosion such as coal mining and other industries, e.g., housings for explosion-protected measurement equipment and switches, ventilation fans for electric motors, chair castors, loud speaker boxes, telephone and radio equipment, profiles for assembly lines  also with electric shock protection
L-R4-MHI black	PA12-HI, MHZ, 16-010	medium viscosity, heat- and light-stabilized, with processing aid, increased cold impact strength	I	1250	10 <sup>5</sup>	
L-R7-MHI black	PA12-HI, MHZ, 16-010	medium viscosity, heat- and light-stabilized, with processing aid, increased cold impact strength; especially designed for parts meeting EN 50014	I	1400	10 <sup>6</sup> – 10 <sup>9</sup>	
L-R9-MHI black			I	1400	10 <sup>8</sup> – 10 <sup>11</sup>	
X3500 black	PA12-HIP, MHZ, 16-007	medium viscosity, heat- and light-stabilized, plasticized, increased cold impact strength	I	700	10 <sup>4</sup> – 10 <sup>7</sup>	
L-R3-EI black	PA12-HI, EHZ, 22-010	high viscosity, heat- and light-stabilized, increased cold impact strength, with processing aid	E	1500	10 <sup>3</sup>	
L-R2-GF25 black	PA12, MHZ, 18-060, 25GF	medium viscosity, 25% chopped strands, heat- and light-stabilized	I	6500	10 <sup>2</sup>	
X7380 black	PA12-HI, MHZ, 16-050, 23GF	medium viscosity, 23% chopped strands, heat- and light-stabilized, increased cold impact strength	I	5400	10 <sup>7</sup>	Quick connectors in conductive fuel lines systems
LX9102 black	PA12-HIP, EHLZ, 22-005	high viscosity, conductive, plasticized, with processing aid, increased cold impact strength	E	600	10 <sup>4</sup>	electrically conductive tubing

\*determined on specimen acc. to EN 50014; corresponds to R<sub>0E</sub> acc. to DIN 53482:1983

E = Extrusion

I = Injection molding

® = registered trademark

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