Levobio Limited

* Measurements were conducted according to ISO 20795-2 and ASTM D882-18

Biobased Monomer

Product Name	LVB-VAN01	LVB-EY012	LVB-EY013	LVB-EY014	LVB-EY021	LVB-EY024	LVB-EY025
Molecular Formula	$C_{19}H_{30}N_2O_8$	$C_{23}H_{38}N_2O_8$	$C_{21}H_{34}N_2O_8$	$C_{27}H_{48}N_4O_6$	$C_{33}H_{40}F_{16}N_4O_{12}$	$C_{19}H_{30}N_2O_8(CH_2CH_2O)_4$	$C_{21}H_{34}N_2O_8$
Molecular Weight	414	471	443	525	989	591	443
Purity (%)	>95%	>95%	>95%	>95%	>95%	>95%	>95%
Physical State	Solid	Liquid	Semi-Liquid	Liquid	Solid	Liquid	Liquid
Functional Group	N-C(=O)O	N-C(=O)O	N-C(=O)O	N-C(=O)O	N-C(=O)O	N-C(=O)O	N-C(=O)O
Flexural Strength (MPa) *	94	111	119	74	81	61	77
UTS (MPa) *	36	34	35	27	29	23	32
Strain at Break (%) *	6.2	5.8	4.7	8.1	11.8	17.4	13.5
Toughness (MPa) *	1.46	1.31	0.95	1.46	2.56	3.14	3.22
Elastic Modulus (MPa) *	877	767	1041	645	557	401	553
Characteristic	Extremely low cost for hard monomer	Extremely low viscosity with high strength	High strength	Eco-friendly	Good elongation with strength	High elongation	Low viscosity and ease for mixing

Special Type Monomer

Product Name	LVB-FMA-4	LVB-EY002	LVB-EY016	LVB-EY017
Molecular Formula	$C_{42}H_{62}F_8N_4O_{12}$	$C_{52}H_{72}F_{16}N_6O_{16}$	$C_{54}H_{72}F_{24}N_6O_{16}$	$C_{56}H_{72}F_{24}N_6O_{16}$
Molecular Weight	967	442.5	1517	1541
Purity (%)	>95%	>95%	>95%	>95%
Physical State	Solid	Solid	Liquid	Solid
Functional Group	Fluorinated Carbon	Fluorinated Carbon	Fluorinated Carbon	Fluorinated Carbon
Flexural Strength (MPa) *	92	78	76	88
UTS (MPa) *	43	23	24	31
Strain at Break (%) *	11.3	14.8	18.0	14.5
Toughness (MPa) *	3.17	3.20	3.50	3.59
Elastic Modulus (MPa) *	844	562	401	623
Characteristic	Novel chemical structure with high strength	Novel chemical structure with high strength	Novel chemical structure with high elongation	Novel chemical structure with medium strength and elongation

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Polyethylene-based Monomer

Product Name	LVB-VAN09	LVB-VAN010	LVB-VAN012	LVB-EY023	LVB-EY026	LVB-EY027	LVB-EY028
Molecular Formula	$C_{57}H_{102}N_6O_{16}$	$C_{284}H_{552}N_{18}O_{82}$	$C_{138}H_{264}N_6O_{43}$	$C_{52}H_{72}F_{16}N_6O_{16}(CH_2CH_2O)_8$	$C_{53}H_{74}F_{16}N_6O_{16}(CHCH_3CH_2O)_9$	$C_{106}H_{198}N_4O_{46}$	$C_{44}H_{74}N_4O_{15}$
Molecular Weight	1127	5531	2696	1694	1878	2265	899
Purity (%)	>95%	>95%	>95%	>95%	>95%	>95%	>95%
Physical State	Liquid	Solid	Liquid	Liquid	Liquid	Liquid	Liquid
Functional Group	PPA-400	PPA-2000	PPA-2000	PEO-400	PPO-600	PEO-1540	PEO-200
Flexural Strength (MPa) *	57	27	37	81	82	57	88
UTS (MPa) *	23	10	20	27	32	18	31
Strain at Break (%) *	23.5	31.5	16.8	16.4	13.7	22.1	16.3
Toughness (MPa) *	3.17	3.01	2.65	3.52	3.52	3.09	4.15
Elastic Modulus (MPa) *	570	610	353	479	634	271	620

Product Name	LVB-EY033	LVB-EY034	LVB-EY035	LVB-EY036	LVB-EY037	LVB-EY040	LVB-EY041
Molecular Formula	$C_{114}H_{206}N_8O_{44}$	$C_{270}H_{518}N_8O_{122}$	$C_{66}H_{118}N_4O_{21}$	$C_{138}H_{262}N_4O_{45}$	$C_{54}H_{94}N_4O_{20}$	$C_{40}H_{70}N_2O_{16}$	$C_{36}H_{64}N_2O_{16}$
Molecular Weight	2393	5829	1304	2697	1119	835	781
Purity (%)	>95%	>95%	>95%	>95%	>95%	>95%	>95%
Physical State	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Functional Group	PEO-400	PEO-1540	PPO-600	PPO-2000	PEO-400	PEO-240-MA	PEO-240-MA
Flexural Strength (MPa) *	64	59	63	34	37	10	2
UTS (MPa) *	20	19	26	15	12	4	2
Strain at Break (%) *	18.5	21.2	13.1	20.8	82.9	45.2	27.9
Toughness (MPa) *	2.89	3.11	2.69	3.23	8.31	1.14	0.18
Elastic Modulus (MPa) *	306	598	477	656	82.7	23	11

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