

Flow Improver ST-PA9

Product Profile

ST-PA9 can be used in polyamide as multifunctional lubricant and dispersing agent. It is modified formulation based on ST-PA7 via adjusting end functional groups. It generates multifunction such as:

- ☺ Lubricating effect
- ☺ Dispersion
- ☺ Surface gloss
- ☺ Impact modification

Typical Application Data

1. Prime PA6 case

Formula	MFI (275°C, 2.16kg)	MFI Change	Notched impact strength (23°C)	Impact strength change %	Tensile Strength	Breaking Elongation	Flexural Strength	Flexural Modulus
Testing Standard	GB/T 3682		GB/T 1843		GB/T1040.4	GB/T 1040.4	GB/T9341	GB/T 9341
Unit	g/10min	%	KJ/m ²	%	MPa	%	MPa	MPa
PA6	54.40	0%	7.2	0%	76.6	28.1	79.4	2389
PA6+0.3% ST-PA9	97.92	80.0%	8.3	15.3%	76.2	37.3	82.4	2362
PA6+0.5% ST-PA9	111.60	105.0%	9.1	26.4%	76.8	44.4	86.6	2322
PA6+0.5% EBS	69.70	28.1%	6.9	-4.2%	77.9	26.3	82.6	2639
PA6+1% EBS	74.60	37.1%	7.0	-2.8%	83.5	27.2	84.1	2553
PA6+0.5% Silicone Powder	62.16	14.3%	7.0	-2.8%	78.4	24.6	86.7	2586
PA6+1% Silicone Powder	68.46	25.8%	7.1	-1.4%	84.6	25.8	87.8	2490

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2. PA6+30%GF case

Formula	MFI (275°C, 2.16kg)	MFI Change	Notched impact strength (23°C)	Impact strength change %	Tensile Strength	Breaking Elongation	Flexural Strength	Flexural Modulus
Testing Standard	GB/T 3682		GB/T 1843		GB/T 1040.4	GB/T 1040.4	GB/T 9341	GB/T 9341
Unit	g/10min	%	kJ/m ²	%	MPa	%	MPa	MPa
PA6+30%GF	25.5	0%	9.8	0%	143.0	7.0	204.0	6950
PA6+30%GF+0.3% ST-PA9	49.4	94.0%	11.0	12.2%	160.0	7.0	222.0	7850
PA6+30%GF+0.5% ST-PA9	69.6	173.0%	10.8	10.2%	163.0	7.2	226.0	8220
PA6+30%GF+0.5% EBS	28.0	9.8%	8.3	-15.3%	150.0	7.8	192.0	7292
PA6+30%GF+1% EBS	28.9	13.3%	8.9	-9.2%	153.2	7.9	195.8	7280
PA6+30%GF+0.5% Silicone Powder	24.5	-3.9%	8.7	-11.2%	162.8	6.1	213.0	7617
PA6+30%GF+1% Silicone Powder	27.2	-6.7%	9.3	-5.1%	163.3	6.7	218.3	7761

3. PA66/PA6+30%GF case

Formula	MFI (275°C, 2.16kg)	MFI Change	Notched impact strength (23°C)	Impact strength change %	Tensile Strength	Breaking Elongation	Flexural Strength	Flexural Modulus
Testing Standard	GB/T 3682		GB/T 1843		GB/T 1040.4	GB/T 1040.4	GB/T 9341	GB/T 9341
Unit	g/10min	%	kJ/m ²	%	MPa	%	MPa	MPa
35%PA66+35%PA6+30%GF	31.1	0%	9.9	0%	163.0	7.1	202.0	6984
35%PA66+35%PA6+30%GF +0.3% ST-PA9	60.2	93.5%	10.8	9.1%	178.0	7.0	226.0	7139
35%PA66+35%PA6+30%GF +0.5% ST-PA9	65.7	111.3%	11.1	12.1%	167.0	7.2	221.0	7151
35%PA66+35%PA6+30%GF +0.5%EBS	33.4	7.4%	11.2	13.1%	185.0	8.1	236.0	8216
35%PA66+35%PA6+30%GF +1%EBS	35.8	15.1%	11.5	16.2%	189.2	8.3	240.1	8280
35%PA66+35%PA6+30%GF +0.5% Silicone Powder	26.5	-14.8%	11.3	14.1%	162.4	7.5	221.0	7958
35%PA66+35%PA6+30%GF +1% Silicone Powder	30.6	-1.6%	11.6	17.2%	167.3	7.7	224.1	7995

Package & Storage

25kg/package, transported as common chemicals. Keep in dry, cool place.

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