

HL-275 Lubricating Processing Aid

Section 1: Description

HL-275 is a lubricating processing aid, it can effectively improve metal release and avoid adhesion between PVC melt and metal surface. It can be used in all kinds of PVC rigid products to promote metal release and extend production cycle.

Section 2: Product benefits

- Improve metal release with no influence on fusion
- Improve melt flowability
- Improve surface gloss

Section 3: Technical specifications

Specification	Unit	Test standard	HL-275
Appearance	--	--	White powder
Bulk density	g/cm ³	GB/T 1636-2008	0.50±0.10
Sieve residue (30 mesh)	%	GB/T 2916	≤1.0
Volatile content	%	ASTM D5668	≤1.30
Intrinsic viscosity (η)	--	GB/T 16321.1-2008	2.00±0.20

Section 4: Basic formulation for properties comparison

Mixing equipment type: SHR-5A from Zhang Jiagang Beier Machinery Co., Ltd

Mixing condition: 50Hz, 120℃ emptying

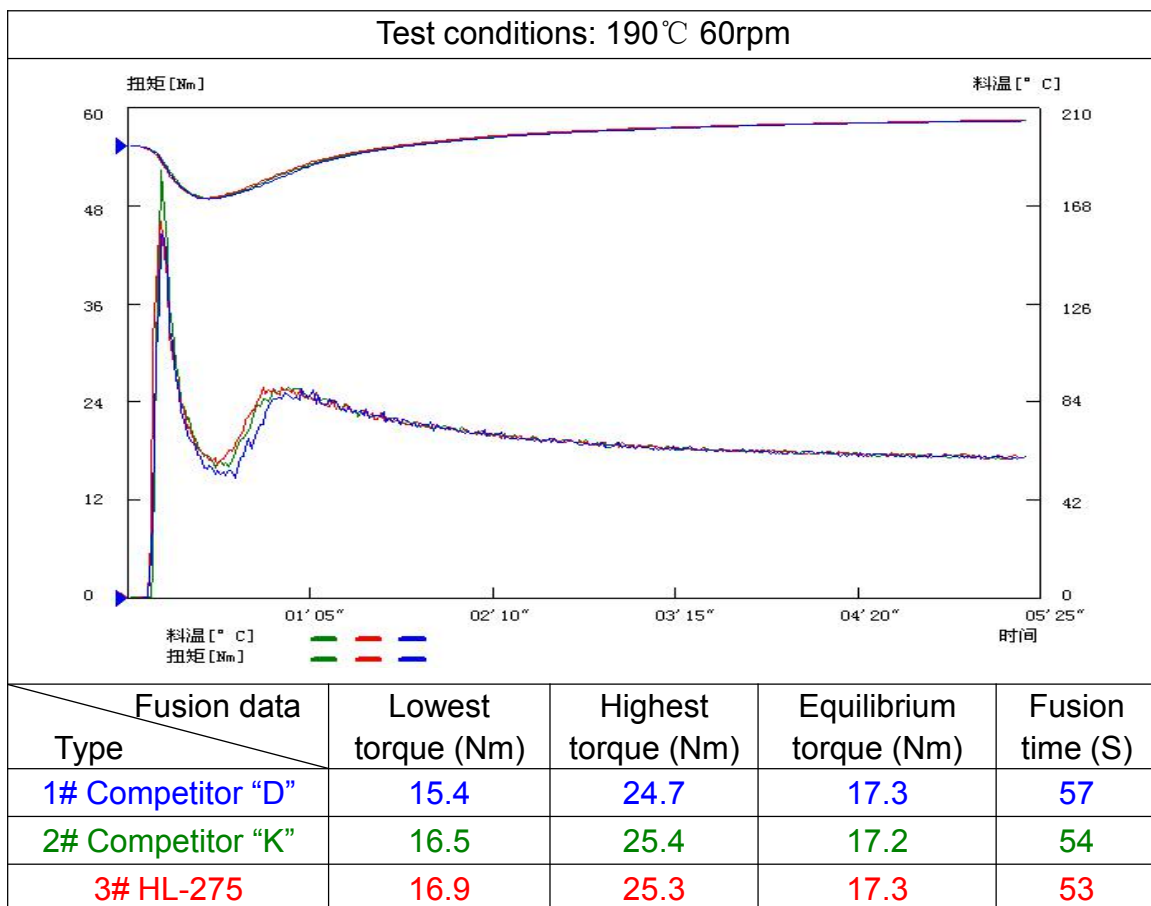
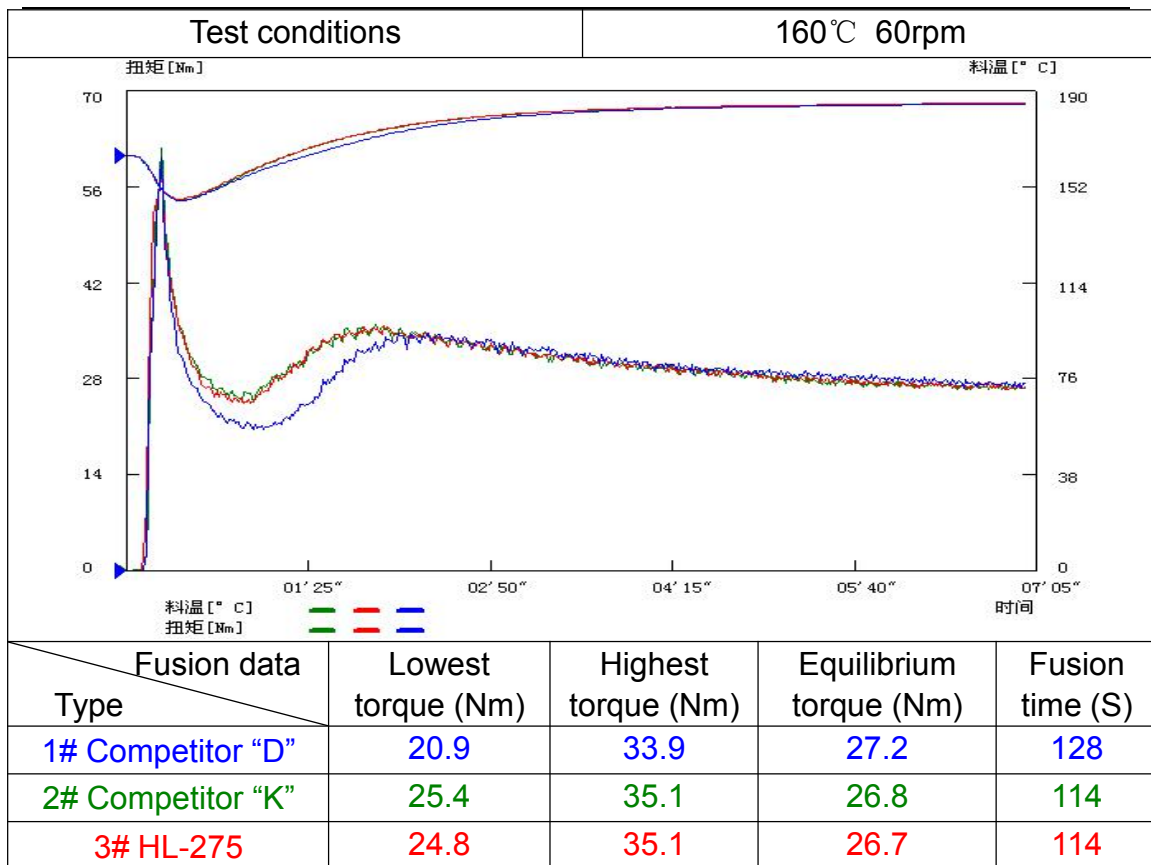
Volume: 5L

Ingredients	1#	2#	3#
	Competitor “D”	Competitor “K”	HL-275
PVC (K-65)	100.00	100.00	100.00
CaCO ₃ (PCC)	5.00	5.00	5.00
Tin stabilizer	0.80	0.80	0.80
Calcium stearic	1.00	1.00	1.00
OPE wax	0.20	0.20	0.20
Paraffin wax(73.8℃)	0.75	0.75	0.75
TiO ₂ (Rutile)	4.00	4.00	4.00
Acrylic impact modifier	5.00	5.00	5.00
Competitor “D”	1.50	--	--
Competitor “K”	--	1.50	--
Lubricating processing aid HL-275	--	--	1.50

Section 5: Fusion property comparison

Test equipment type: RM-200C torque rheometer from Harbin Hapro Electrical technology Co., Ltd

Volume: 60ml



Section 6: Metal release property

Dynamic thermal stability and sticking time on mill at 196°C

(YI with different time)

Time	3'	5'	7'	9'	11'	13'	15'	17'	19'
1# Competitor D	6.82	8.55	9.92	11.20	12.66	14.68	16.50	19.20	Sticking
2# Competitor K	6.60	8.05	9.73	10.90	12.35	14.20	16.27	18.95	Sticking
3# HL-275	6.40	7.82	8.92	10.33	11.55	13.24	15.46	17.90	Sticking

Section 7: Melt flowability of PVC compound

Test equipment: Melt flow rate meter Test standard: ASTM D1238

Melt Flow rate (g/10min)	
Testing condition	230°C 3.8kg
1# Competitor "D"	17.74±0.3
2# Competitor "K"	18.02±0.5
3# HL-275	18.45±0.4

Section 8: Gloss comparison

Test standard: ASTM D2457-08

Test condition: 45°

Type	Gloss of PVC extruded sheet
1# Competitor "D"	57.6±1.5
2# Competitor "K"	58.9±1.3
3# HL-275	59.8±1.2

Section 9: Packaging and storage

20kg/bag: PP valve bag with PE liner

500kg/sack: PP bag with PE liner

It should be stored in cool and dry surroundings, with shelf life of two years, it can be still used if qualified by inspection after shelf life.