

HELI™ CPE-135A CPE Impact Modifier

Section 1: Description

HELI™ CPE impact modifier type CPE-135A is a kind of thermoplastic resin which consist of HDPE and Chlorine. It can improve the elongation at break and toughness of PVC products. CPE-135A is mainly applied to all kinds of rigid PVC products, such as profile, siding, pipe, fence and so on.

Section 2: Benefits

- Good elongation at break and toughness
- Good weather-resistance

Section 3: Technical specifications

Specification	Unit	Test standard	CPE-135A
Appearance	---	---	White powder
Bulk density	g/cm ³	GB/T 1636-2008	0.50±0.10
Sieve residue (30 mesh)	%	GB/T 2916	≤2.0
Volatile content	%	ASTM D5668	≤0.40
Specific gravity	--	ASTM D792	1.0-1.2
Tensile strength	MPa	GB/T 528-2009	6.0±2
Elongation at break	%	GB/T 528-2009	>800
Hardness (Shore A)	A	GB/T 2411-2008	>50.0
Chlorine content	%	GB/T 7139	35.0±2.0
CaCO ₃ (PCC)	%	HG/T 2226	≤5.00

Section 4: Basic formulations for following tests

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

Mixing condition: 50Hz, 120°C emptying

Volume: 5.0L

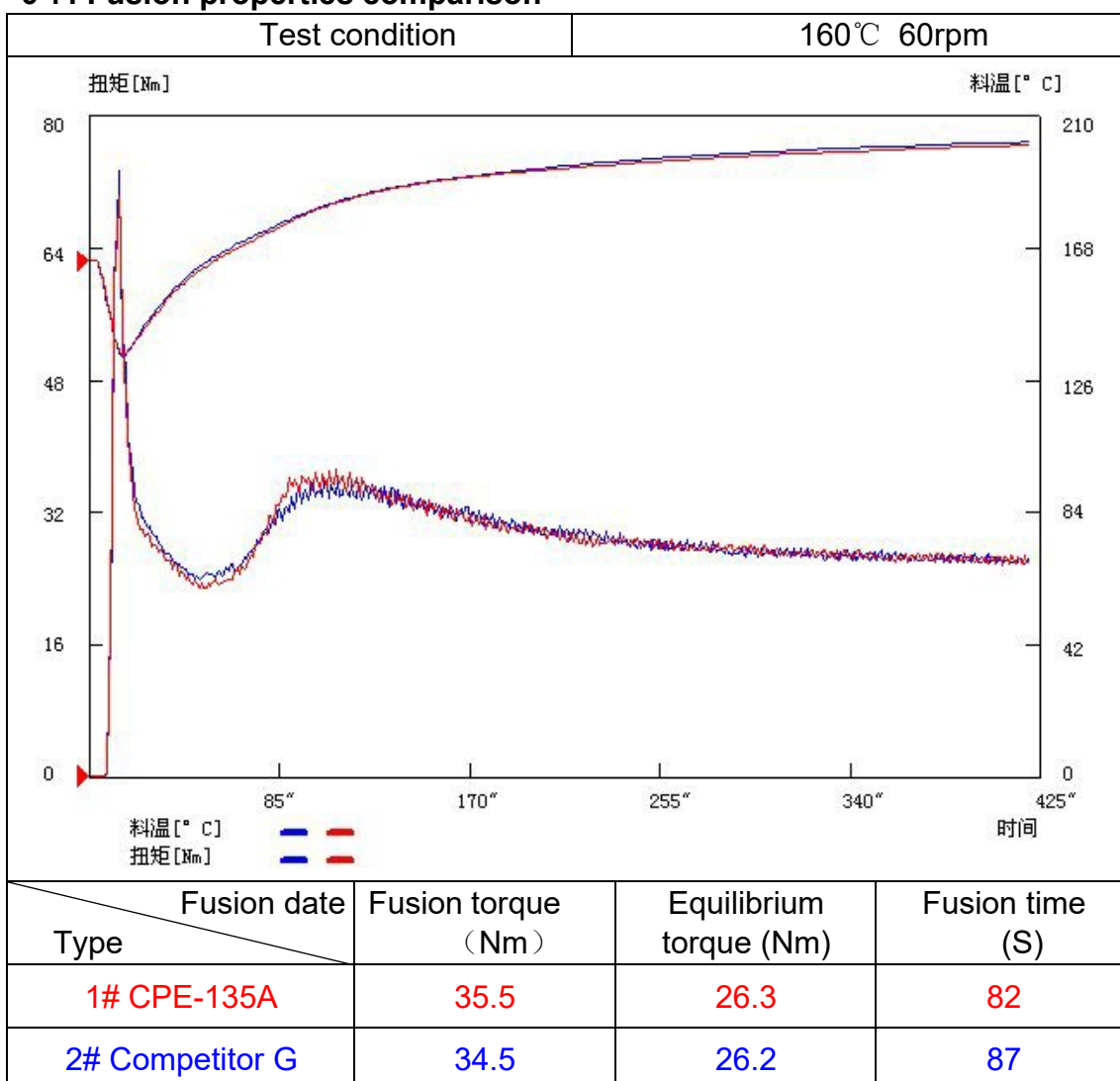
Ingredients	0#Control	1#CPE-135A	2#Competitor G
PVC (K-65)	100.00	100.00	100.00
Lead stabilizer	4.00	4.00	4.00
PE wax	0.2	0.2	0.2
Stearic acid			
TiO ₂ (Rutile)	5.00	5.00	5.00
CaCO ₃ (PCC)	40.00	40.00	40.00
Processing aid HL-200	1.00	1.00	1.00
CPE-135A	--	10.00	--
CPE	--	--	10.00

Section 5: Properties comparison

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

Volume: 60ml

5-1 : Fusion properties comparison



5-2 : Mechanical properties comparison

Specification Type	Elongation at break	Tensile strength	0°C Charpy impact strength	Hardness (Shore D)	Vicat softening point
Unit	%	MPa	KJ/m ²	--	°C
Test standard	GB/T 1040	GB/T 1040	GB/T 1043.1	GB/T 2411	GB/T 1633
0# Control	90.6±2.0	41.4±0.4	7.2±0.3	82.9±0.5	81.9±0.3
1#CPE-135A	145.2±1.5	39.3±0.3	14.9±0.3	80.7±0.2	80.4±0.1
2#Competitor G	131.6±1.5	38.6±0.3	14.2±0.3	80.5±0.2	79.9±0.2

5-3 : Gloss comparison Test condition: 45° ASTM D2457

Type	Gloss of PVC extruded sheet
0# Control	14.8±1.5
1# CPE-135A	31.0±1.2
2# Competitor G	30.5±1.2

Section 6: Product application

CPE-135A is widely used for rigid PVC applications, such as PVC window profile, pipe, fence, siding and so on.

Section 7: Packaging and storage

25kg/bag: PP valve bag with PE liner

600kg/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.