

Tuffmod™ HLC-J412 CPVC pipe

Section 1: Description

HLC-J412 is one compound system with 100% CPVC pipe for high vicat softening point need with Tin stabilizer system which is made for hot and cold water application.

Section 2: Product benefits

- good processibility
- Excellent metal release
- Higher pressure resistance
- Higher impact strength
- Better surface quality

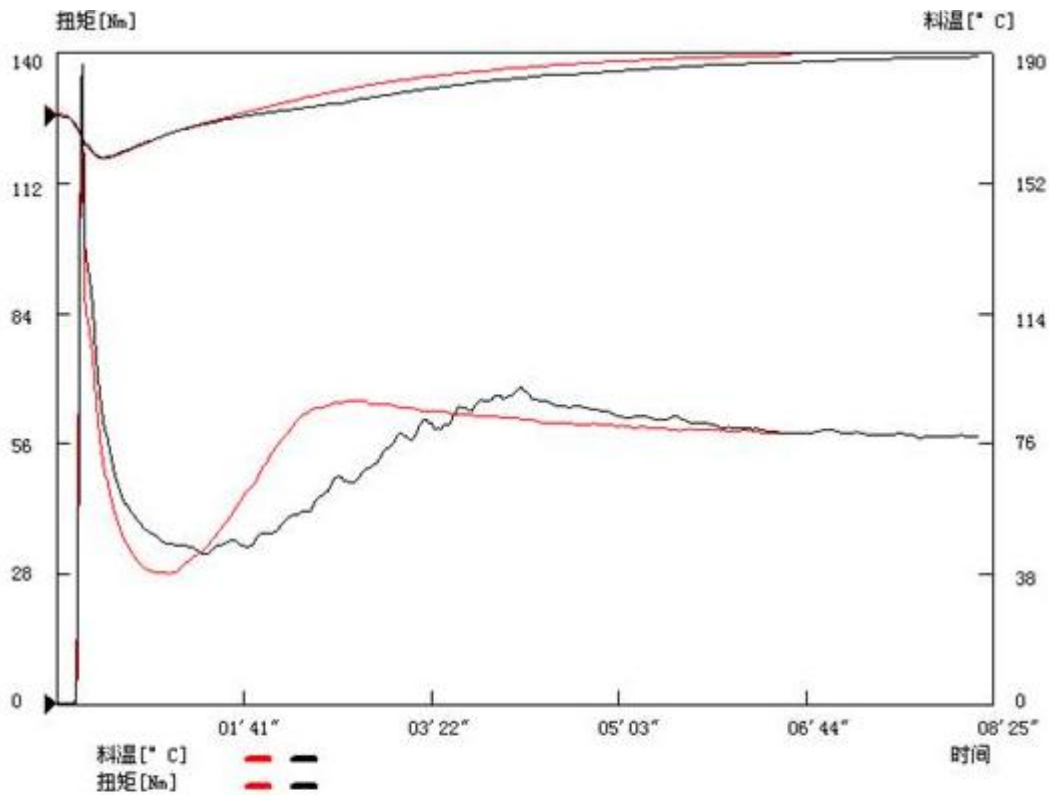
Section 3: Technical specifications

Specification	Unit	Test standard	HLC-J412
Appearance	--	--	White powder
Bulk density	g/cm ³	GB/T 1636-2008	0.60±0.10
Sieve residue (30 mesh)	%	GB/T 2916	≤2.0
Volatile content	%	ASTM D5668	1.00±0.50

Section 4: Fusion properties comparison

Test equipment type: RM-200A torque rheometer from Harbin Hapro
Electrical technology co., LTD Volume: 60ml

Test condition: 170℃ 60rpm

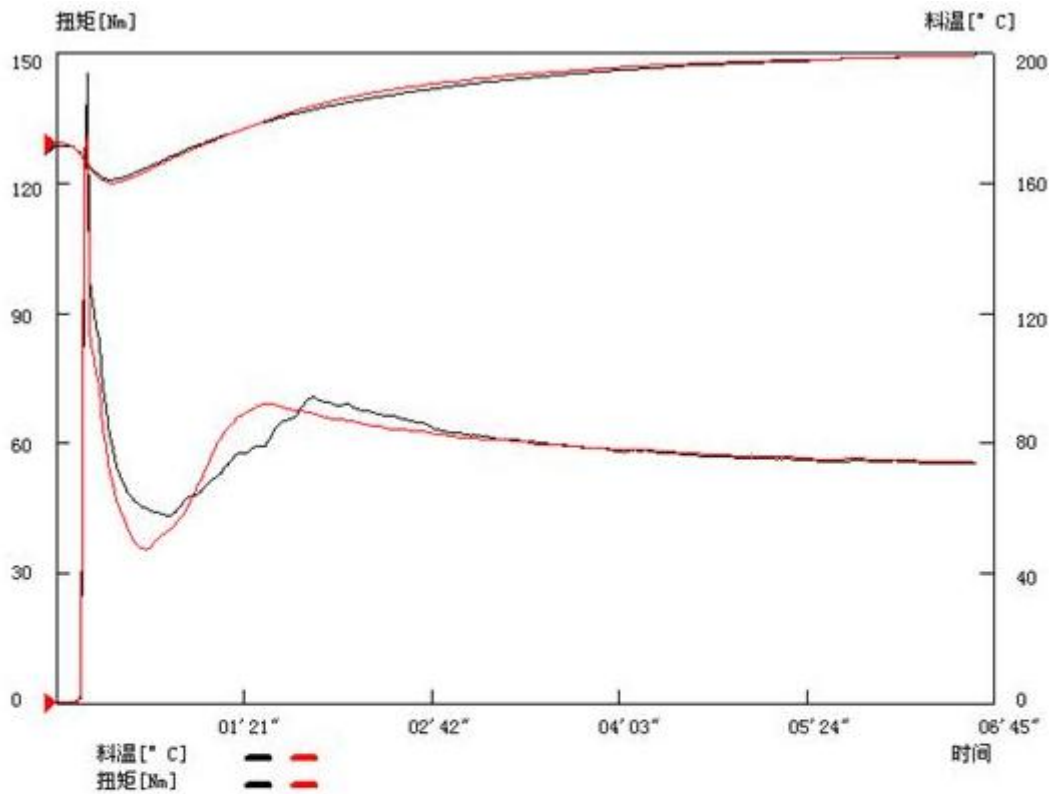


实验结果

	样品	质量[g]	实验条件				
			T1[° C]	T2[° C]	T3[° C]	料温[° C]	转速[rpm]
0	2-23017 Competitor		170.0	170.8	169.9	172.1	59.7
1	2-22887 HLC-J412		169.9	170.6	169.9	171.5	59.7

Type	Fusion data	Lowest torque (Nm)	Highest torque (Nm)	Equilibrium torque (Nm)	Fusion time (S)
1# Competitor		28.4	64.8	57.8	140
2# HLC-J412		32.4	68.1	57.6	230

Test condition: 170°C 90rpm

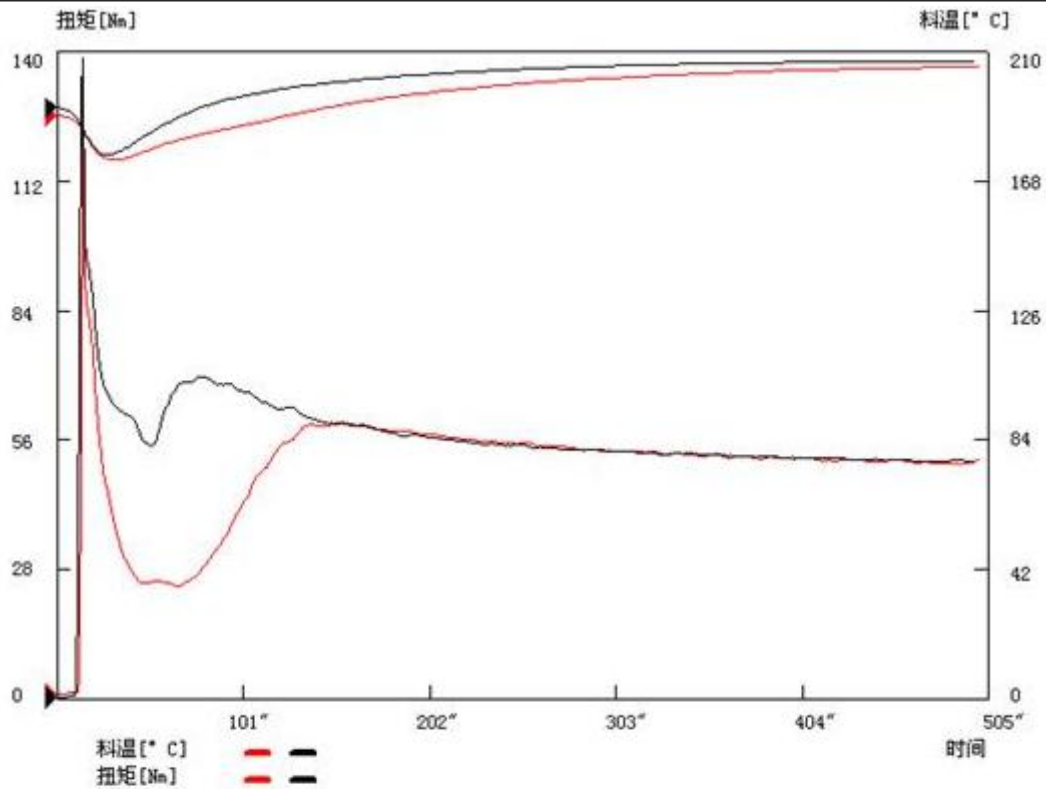


实验结果

	样品	质量[g]	实验条件				
			T1[° C]	T2[° C]	T3[° C]	料温[° C]	转速[rpm]
0	2-22889 Competitor		169.6	170.6	169.8	171.5	89.7
1	2-22320 HLC-J412		169.9	170.5	170.0	172.3	89.7

Type	Fusion data	Lowest torque (Nm)	Highest torque (Nm)	Equilibrium torque (Nm)	Fusion time (S)
1# Competitor		35.1	68.7	55.0	76
2# HLC-J412		43.3	70.3	55.0	93

Test condition: 190°C 60rpm

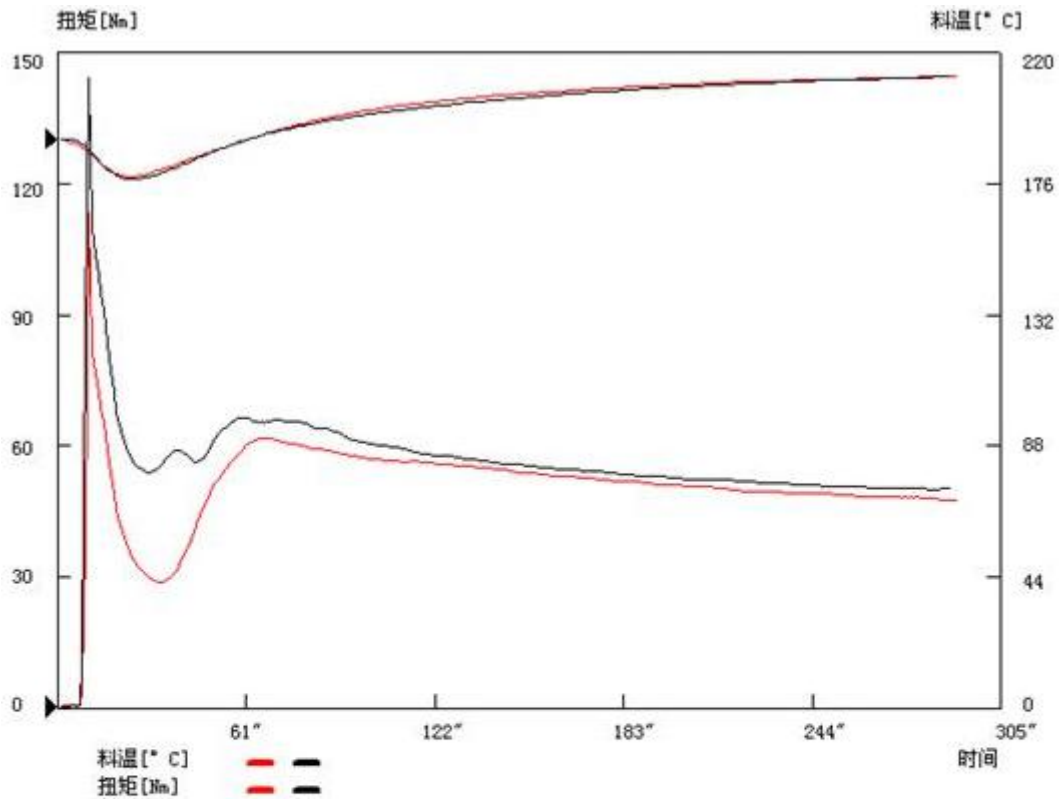


实验结果

	样品	质量[g]	实验条件				
			T1 [°C]	T2 [°C]	T3 [°C]	料温 [°C]	转速 [rpm]
0	2-23045 Competitor		190.0	190.0	190.0	189.1	59.7
1	2-23048 HLC-J412		189.9	190.5	190.0	191.8	59.7

Type	Fusion data	Lowest torque (Nm)	Highest torque (Nm)	Equilibrium torque (Nm)	Fusion time (S)
1# Competitor		25.5	58.3	48.4	127
2# HLC-J412		55.2	69.6	48.5	62

Test condition: 190℃ 90rpm



实验结果

	样品	质量[g]	实验条件				
			T1 [°C]	T2 [°C]	T3 [°C]	料温 [°C]	转速 [rpm]
0	2-22323 Competitor		189.6	191.0	189.8	192.3	89.7
1	2-22891 HLC-J412		190.3	190.5	190.0	191.0	89.7

Type	Fusion data	Lowest torque (Nm)	Highest torque (Nm)	Equilibrium torque (Nm)	Fusion time (S)
1# Competitor		26.9	61.3	48.0	57
2# HLC-J412		53.9	66.4	50.0	50

Section 5: Mechanical properties comparison

Test method:

1. Make plate with compound on double-roller mill under 190℃ for 5min.
2. Then retain 6 min in curing press at 190℃
3. According to the following test standards and test conditions, prepare

samples and test results.

Specification	Test Condition	Test standard	1# Competitor	2# HLC-J412
Charpy impact strength (KJ/m ²)	23℃	GB/T 1043	13.2	13.5
Tensile strength(MPa)	23℃, 10mm/min	GB/T 1040	49.6	51.0
Elongation at break (%)	23℃, 10mm/min	GB/T 1040	53.5	67.8
Hardness (Shore D)	23℃	GB/T 2411	81.2	81.5
Vicat softening point(℃)	5Kg, 120℃ /h	GB/T 1633	110.6	111.9

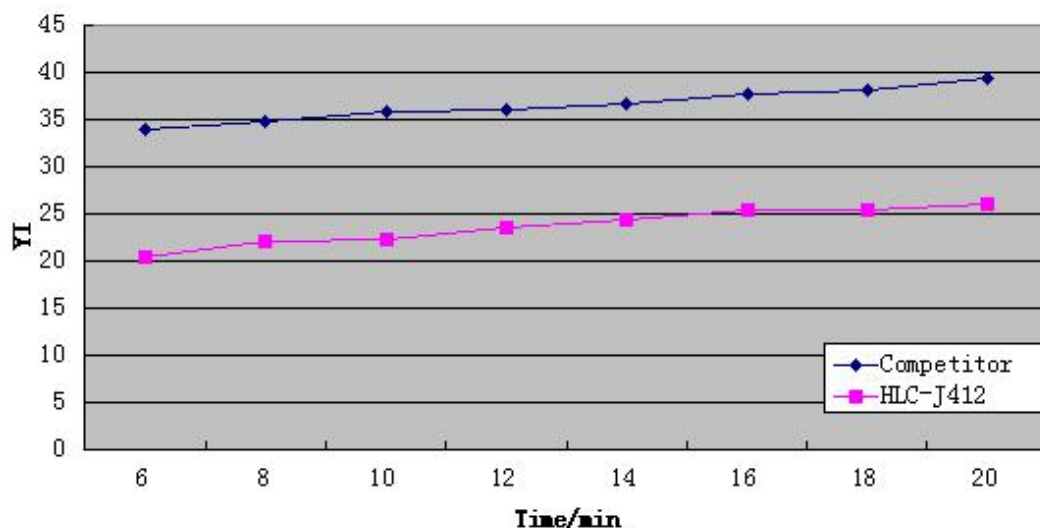
Section 6: Dynamic thermal stability

Temperature of two-roll mill: 190℃ Roller spacing: 0.5mm

Test standard: ASTM E313-00

YI with the different time

Type	6'	8'	10'	12'	14'	16'	18'	20'
1# Competitor	34.0	34.82	35.79	36.04	36.79	37.64	38.25	39.42
2# HLC-J412	20.46	22.03	22.38	23.59	24.48	25.45	25.45	25.99



Remark: Above data is only for your reference, there should be tolerance due to different people or environment of tests.

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.

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