



Acrylic Processing Aid

Lubricating processing aid: AIP 1750

Version: 03

Revision date: 1st July, 2019

Part 1: Introduction

AIP 1750 is a lubricating processing aid. It can effectively improve metal release and avoid adhesion between PVC melt and metal surface. It can be used separately or with other processing aid to promote PVC fusion. It can be used in all kinds of PVC rigid products to promote metal release and extend production cycle.

Part 2: Advantages

- Enhanced metal release without influence on fusion
- Improved melt flow ability
- Improved thermal stability
- Excellent clarity and surface quality for end products
- Excellent fusion promotion efficiency, increased output rates and improved production efficiency, decreased processing temperature

Part 3: Application

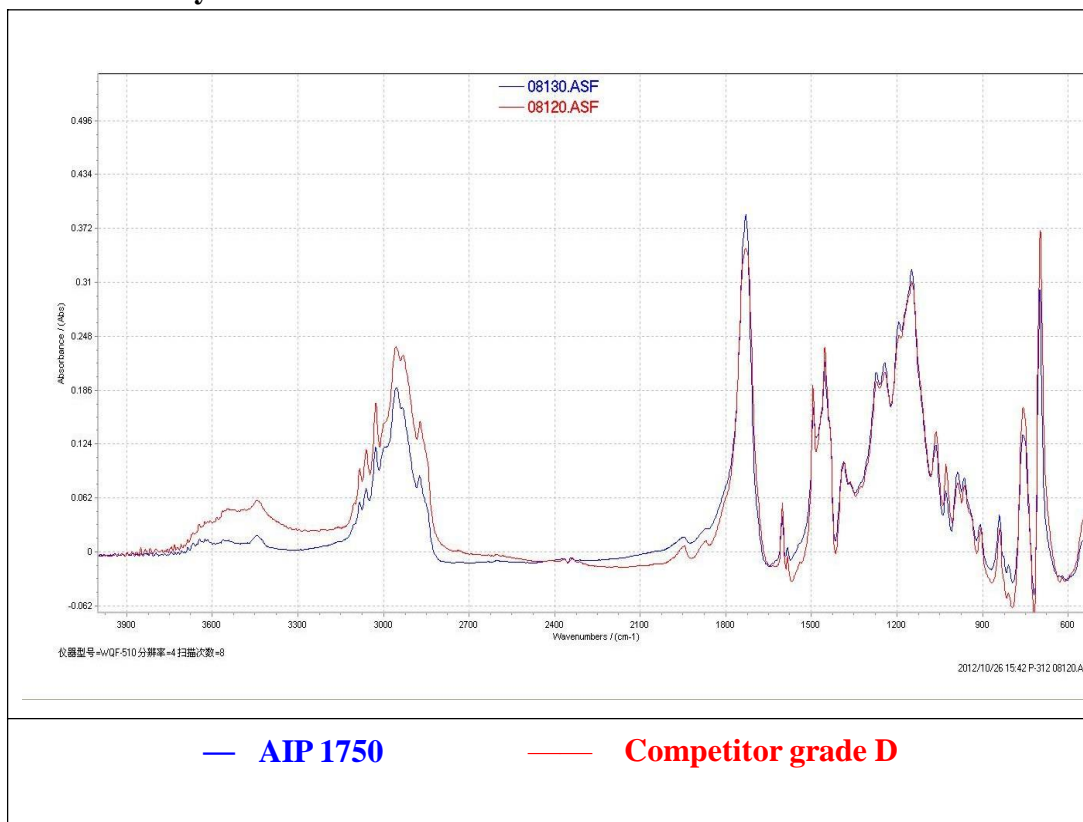
AIP 1750 can be widely used in the window profile, sheet, fencing, pipes, pipe fitting, etc.

Part 4: Composition

Technical Specifications

Specification	Unit	Test standard	AIP 1750
Appearance	--	--	White powder
Bulk density	g/cm ³	GB/T 1636-2008	0.45±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	0.5-2.0

4.2 FTIR Analysis



Part 5: Performance Comparison

5.1 Basic formulation for following test

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

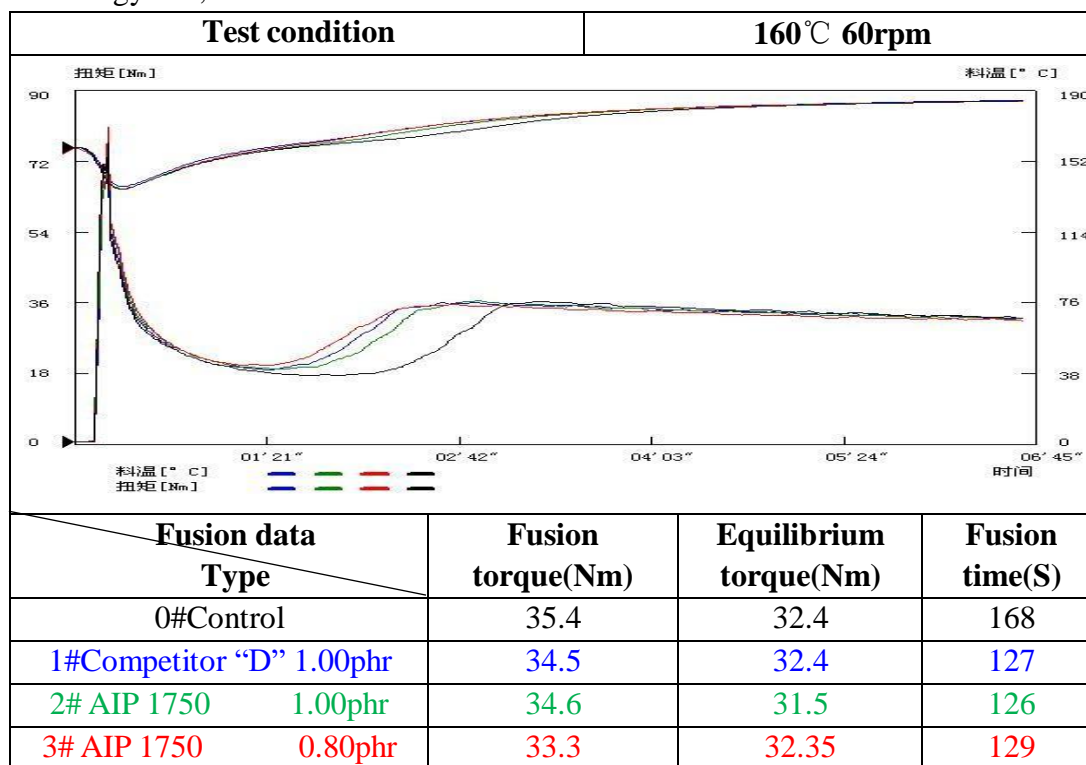
Mixing condition: 120°C

Volume: 5L

Ingredients	0#Control	1# Competitor "D"	2# AIP 1750	3# AIP 1750
PVC (K-65)	100.00	100.00	100.00	100.00
CaCO ₃ (PCC)	5.00	5.00	5.00	5.00
Ca-Zn stabilizer	4.50	4.50	4.50	4.50
Stearic acid	0.20	0.20	0.20	0.20
PE wax (110°C)	0.15	0.15	0.15	0.15
TiO ₂ (Rutile)	4.00	4.00	4.00	4.00
Acrylic impact modifier	5.00	5.00	5.00	5.00
PA Competitor "D"	--	1.00	--	--
Processing aid AIP1750	--	--	1.00	0.80

5.2 Fusion property comparison

Test equipment type: RM-200C torque rheometer from Harbin Hapro Electrical technology Co., Ltd
Volume: 60ml



5.3 Metal release property comparison

Sticking time on double-roller mill at 196°C

Type	Sticking time (S)
0# Control	345±15
1# Competitor "D" 1.00phr	760±12
2# AIP 1750 1.00phr	870±10
3# AIP 1750 0.80phr	770±11

5.4 Melt flow ability comparison

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

Melt Flow rate (g/10min)	
Test condition	230°C 3.8kg
0# Control	8.30±0.5
1# Competitor "D" 1.00phr	10.90±0.4
2# AIP 1750 1.00phr	12.20±0.3
3# AIP 1750 0.80phr	11.20±0.4

5.5 Gloss of PVC extruded sheet

Test standard: ASTM D2457-08

Test condition: 45°

Type	Gloss of PVC extruded sheet
0# Control	19.20±1.7
1# Competitor “D” 1.00phr	27.0±1.5
2# AIP 1750 1.00phr	30.5±1.1
3# AIP 1750 0.80phr	28.5±1.2

Part 6: Packing, transportation and storage

20kg/25 kg bag, 250kg/500 kg super sack

This material is non-dangerous goods for land, air and marine transportation.,

Material should be kept from flames, hot pipes, heaters or other sources of heat.

Adequate precautions should be taken to keep all dust levels below values that are hazardous to health and safety. The recommended maximum storage temperature for this material is 45 deg. C.

Part 7: Safe Handling

Please consult the MSDS before handling for additional information concerning personal protective equipment, Safety, Health and Environmental information, and always exercise the utmost care in handling.