Acrylic Processing Aid

General processing aid : AIP 2300

Revision date: 1st July,2017

Part 1: Introduction

AIP 2300 is a general purpose processing aid based on medium molecular weight. It can be applied to PVC building and construction materials such as window profile, siding, fence, pipe, fitting and other injection parts. AIP 2300 is also extremely cost-effective, requiring only very low addition levels for high-quality results.

Part 2: Advantages

- Promotes faster fusion
- Increases melt strength, enhances extensibility and improves melt homogeneity
- Increases the surface glossy of PVC finished products.
- Offers excellent wall-thickness control and good thermoforming capabilities.

Part 3: Application

AIP 2300 can be widely used window profile, siding, fence, pipe, fitting and other injection parts and foam products

Part 4: Technical specifications

Test item	Unit	Test standard	Specification
Appearance	--	--	White powder
Bulk density	g/cm^3	GB/T 1636-2008	0.45±0.10
Sieve residue (30 mesh)	%	GB/T 2916	≤2.0

Volatile content	%	ASTM D5668	≤1.50
Intrinsic viscosity (η)	--	GB/T 16321.1-2008	5.20±0.20

Part 5: Performance Comparison

5.1 Basic formulation for following tests

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

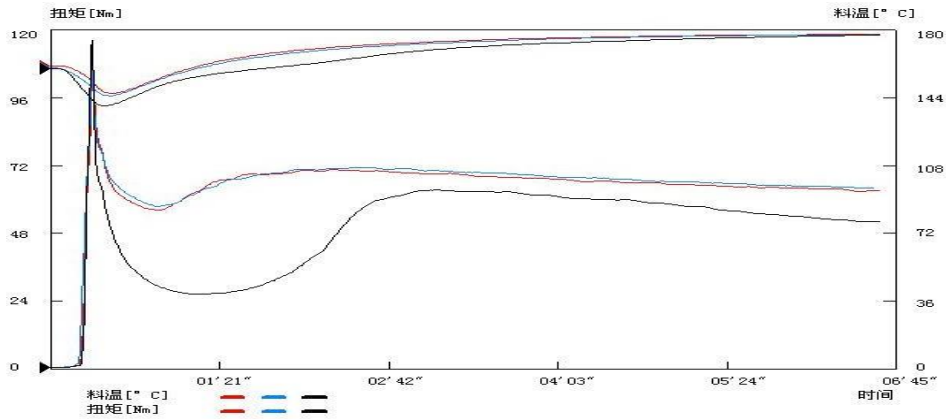
Mixing condition: 50Hz, 120℃ emptying Volume: 5L

Ingredients	1#	2#	3#
	Control	K-125	AIP 2300
PVC (K-65)	100.00	100.00	100.00
$CaCO_3$ (PCC)	5.00	5.00	5.00
Ca-Zn stabilizer	4.50	4.50	4.50
Stearic acid	0.12	0.12	0.12
PE wax	0.22	0.22	0.22
TiO_2 (Rutile)	4.00	4.00	4.00
Acrylic impact modifier	5.00	5.00	5.00
PA competitor K-125	--	1.00	--
Processing aid AIP 2300	--	--	1.00

5.2 Fusion property comparison

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

Test conditions	160℃ 60rpm



Fusion data / Type	Lowest torque (Nm)	Highest torque (Nm)	Equilibrium torque (Nm)	Fusion time (S)
1# Control	26.8	63.5	52.2	155
2# Competitor K-125	56.2	70.3	62.8	80
3# AIP 2300	57.5	70.6	63.7	80

5.3 Gloss comparison

Test standard: ASTM D2457 Test condition: 45°

Type	Gloss of PVC extruded sheet
1# Control	17.1±1.5
2# Competitor K-125	28.5±1.2
3# AIP 2300	33.2±1.0

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.