



## Acrylic Impact Modifier

### Opaque Acrylic Impact Modifier: AIM 800

Revision date: 1st July,2017

### Part 1: Introduction

AIM 800 is acrylic impact modifier with core/shell structure in which core being moderate cross linked structure is linked with shell by grafting copolymerization. It not only improves impact resistance performance of the product, but also increases the surface gloss, especially the weatherability of product. AIM 800 is also extremely cost-effective, requiring only very low addition levels for high-quality results.

### Part 2: Advantages

- Promote fusion
- Excellent weatherability
- Better impact strength
- Ideal cost-performance ratio

### Part 3: Application

AIM 800 can be widely used in the PVC profiles, sheets, boards, pipes, fittings, etc.

### Part 4: Composition

#### Technical specification

Specification	Unit	Test standard	AIM 800
Appearance	--	--	White powder
Bulk density	g/cm <sup>3</sup>	GB/T 1636-2008	0.45±0.10
Sieve residue (30 mesh)	%	GB/T 2916	≤2.0
Volatile content	%	ASTM D5668	≤1.00

<b>Glass transition temperature (Tg)</b>	°C	GB/T 19466	-42.1±1.0
--	----	------------	-----------

## Part 5: Performance Comparison

### 5.1 Basic formulation for properties comparison

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

Volume: 5L

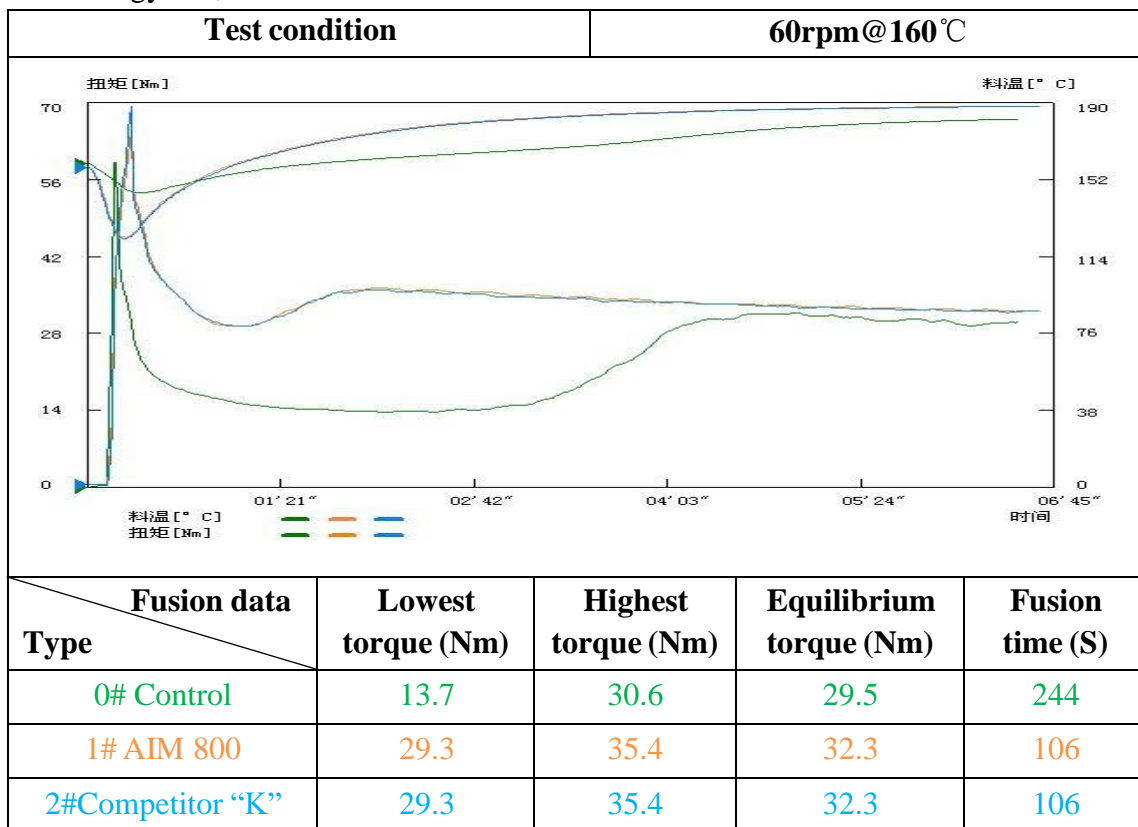
Mixing condition: 120°C

Ingredients	0#	1#	2#
	Control	AIM 800	Competitor “K”
PVC (K-65)	100.00	100.00	100.00
Ca-Zn stabilizer	4.50	4.50	4.50
CaCO <sub>3</sub> (PCC)	5.00	5.00	5.00
PE wax (110°C)	0.15	0.15	0.15
TiO <sub>2</sub> (Rutile)	4.00	4.00	4.00
Processing aid AIP 2300	0.80	0.80	0.80
Acrylic impact modifier AIM 800	--	5.00	--
AIM competitor “K”	--	--	5.00

### 5.2 Fusion properties comparison

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

Volume: 60ml



### 5.3 Mechanical properties comparison

Test method:

- ① Make plate with compound on double-roller mill under 185°C for 5min.
- ② Then retain 6 min in curing press at 185°C
- ③ According to the following test standards and test conditions, prepare samples and obtain test results.

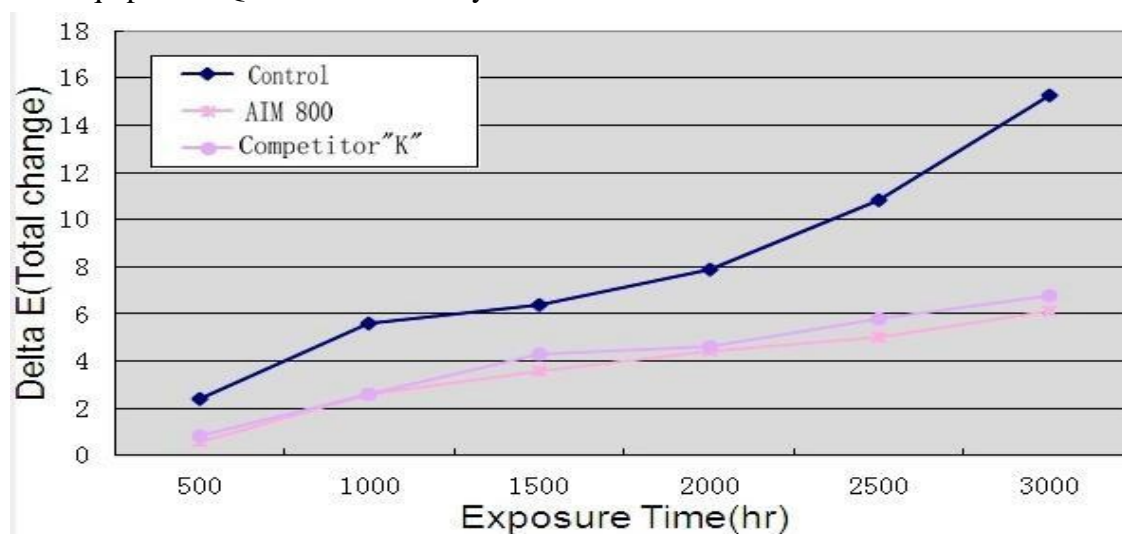
Specification	Unit	Test standard	0#	1#	2#
			Control	AIM 800	Competitor "K"
Charpy impact strength(0°C)	KJ/m <sup>2</sup>	GB/T 1043.1-2008	5.3±0.2	10.3±0.3	10.0±0.3
Tensile strength	MPa	GB/T 1040-92	42.9±0.4	40.7±0.3	40.9±0.3
Elongation at break	%	GB/T 1040-92	88.2±2.1	152.8±2.5	145.0±2.7
Vicat softening point	°C	GB/T 1633-2000	83.0±0.3	82.1±0.2	82.2±0.2
Hardness (Shore D)	--	GB/T 2411-2008	83.2±0.3	82.0±0.2	82.2±0.2

### 5.4 Weatherability

AIM 800 can endow PVC finished products with good mechanical properties, at the same time show ideal weather-resistance

Test equipment: QUV Weatherability Tester

ASTM G154



※ Remarks: The above data are from our lab tests for your reference.

## **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°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.