

<u>AHA 2006</u>

Wax based matting agent for PES/TGIC powder coatings

AHA2006 is a modified polyethylene wax based matting agent specially designed for outdoor durable TGIC powder coating to provide ranges from 30-40% of gloss and smooth matte finishes. It can also be used in other all powder coatings endowing with appropriate semi-gloss. For Primid system, ca.60% of gloss can be achieved but having a tendency to severed yellowing therefore no recommended.

1. Specification

Appearance	[visual]	pale yellow powder
Soft point (°C)	[Ring & Ball method]	114-120
Bulk density (g/l)		450-550

2. Characteristics

- 26% (60°)[min.] of gloss for **PES/TGIC** powder coating without significantly damaging to the weather-resistance, flow and mechanical properties as well as usually application to aluminum extruded window or door profile, lighting fixture, appliances, air conditioners, and office partitions and automotive articles.
- Application in other all coating systems such as pure **epoxy** and **epoxy- polyester hybrid** to provide semi-gloss, smooth appearance and good non-yellowing properties.
- Unnecessary for special designed formulation and only adding simply at the premix stage of powder coatings due to non-reactive. Varying use levels or selecting proper fillers can further adjust the gloss, but the variable ranges are usually limited.

<u>3.1. PES/TGIC system</u>					
Formulation (parts by weight)		II		IV	V
CC440 [Cytec.]	400	400	/	/	/
CC450 [Cytec.]	/	/	/	400	/
SJ4#D [Shenjian]	/	/	400	/	400
AHA2006	27	20	20	20	36.5
TGIC	30	30	30	30	30
TiO ₂ [RCL575]	133	133	133	133	133
SparwiteW44HB	80	80	80	80	80
Resiflow PV88 ⁽¹⁾	6	6	6	6	6

3. Suggested formulations

Notice:

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<u>AHA4000</u>	<u> </u>	6	6	6	6	
Total	682	675	675	675	691.5	
Extruded condition						
Twin screw extruder, mo	odel SLJ-30, zon	<u>e I,95℃, zon</u>	e II,105 ℃;	speed, 25	0rpm	
Baking condition	200°C/10min					
Gloss % (60°)	36	44	38	44.5	26	
Flow properties	Ex.	Ex.	Ex.	Ex.	good	
Impact (50Kg·cm)	passed	passed	passed	passed	passed	

3.2. Epoxy/Polyester hybrid (white)

Formulation (parts by weight)	I	II		IV	V	VI
Epoxy E-12	300	300	300	300	300	300
Polyester SJ3#B(shenjian)	300	300	300	/	/	/
Polyester SP4127(Dupont-Huajia)	/	/	/	300	300	300
AHA2006	21	33	50	21	33	50
Resiflow PV88 ⁽¹⁾	9	9	9	9	9	9
BaSO ₄	50	50	50	50	50	50
TiO ₂ (R902)	250	250	250	250	250	250
<u>AHA4000⁽²⁾</u>	5	5	5	5	5	5
Total	935	947	964	935	947	964
Baking condition		19	0°C/15min			
Gloss % (60°)	37	31	27	60	45	30
Impact (50Kg·cm)	passed	passed	passed	passed	passed	passed
Flow properties	Ex.	Ex.	Good	Ex.	Ex.	Good

(1) A flow modifier from Worlee. (Ger.)

(2) A slip and degassing agent, AHA international.

Ex. = excellent

4. Black/Dark color powder

There may be somewhat waxy releaser on surface for black/dark color powder coating.

5. Use level

No recommend to use at the loading over 3% by total weight of formulation as poor free-flowing, wet blocking of powder or spray gun plugging problem etc.

6. Accelerator/Catalyst

No accelerator/catalyst is added into the formulation comprising AHA2006 to improve impact Notice: 2

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resistance because it would result in undesired gloss-up and surface leveling worsened.

7. Storage

Store in temperature between 2 and 40° C or cool and dry place. Keep away from heat and fire.

Based on our experience the shelf life of this product is at least 3 years.

8. Package

Package with PE lined craft paper bags. Net weight 25Kg per bag.

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