

TIANHUA GROUP



.. Retroreflective Thermoplastic Road Marking Material
Conforming to AASHTO M249

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Thermoplastic road marking material conforming to AASHTO M249 shall consist of light colored aggregate, pigment and extender, bound together with aliphatic hydrocarbon resin plasticized with mineral oil. Glass beads shall be in accordance with AASHTO M247 – TYPE I. The material shall be provided in granular form.

SALIENT FEATURES

- Whiteness and Retro reflective.
- Fast drying thus good flow resistance.
- Skid resistance.
- Durability and long lasting results.
- Heat stability.
- Color stability.
- Adaptable to any type of road.
- Cost effective & provides value for money.
- Non toxic and environment friendly.

Composition of Constituents

Constituent	Percentage (by mass)	
	White	Yellow
Binder	18 Min	18 Min
Glass beads	30 - 40	30 – 40
Titanium Dioxide	10 Min	---
Calcium Carbonate and Inert Filler	42 Max.	42 Max.
Yellow Pigment	----	As Required

Physical Characteristic

TECHNICAL DATA	Typical Results			
	White		Yellow	
	As per AASHTO M249	AMITEK WHITE	As per AASHTO M249	AMITEK YELLOW
Softening Point °C	102.5 ± 9.5	Complies	102.5 ± 9.5	Complies
Specific Gravity gm/cm ³	< 2.15	Complies	< 2.15	Complies
Flowability %	18 Max	Complies	21 Max.	Complies
Flowability - Extended Heating	28 Max.	Complies	28 Max	Complies
Drying Time	< 2 min@ 10±2 < 10 min @32±2	Complies	< 2 min@ 10±2 < 10 min @32±2	Complies
Yellow Index	Below 0.12	Complies	--	Complies
Cracking Resistance	No Cracks	Complies	No Cracks	Complies
Impact Resistance (Joules)	≥1.13	Complies	≥1.13	Complies
Color Daylight Reflectance	75% min.	Complies	45% min.	Complies

Grading of Glass Beads AASHTO M247

Sieve Size (mm)	% Passing
0.850	100
0.600	75 – 95
0.300	15 – 35
0.150	0 – 5

SURFACE PREPARATION

Prior to application the surface should be sound and in good condition. It must be clean, dry, free from dust, dirt, grease, oil or any other foreign matter. The road surface temperature should be above 5°C. Ideally existing markings should be removed prior to application. Thermoplastic Road Marking Material may be applied over existing thermoplastic markings provided that they are in good condition and should not be applied on old paint markings. On worn bituminous and concrete surfaces, a suitable primer should be used prior to application.

DIRECTIONS FOR USE

- Although the Ashto Standard permits heating the material to **211±7°C**, but still for best results we recommend you to heat the material to **180°C -190°C** in the pre-heater till it transforms into a homogenized liquid and start laying the Thermoplastic on the Road.
- Ensure that the road surface is clean and free from dust & moisture.
- Heavy deposits of paint require removal.
- For aged asphalt roads and concrete roads the application of a primer coat; is recommended for proper bonding of the material with the road surface.
- Ensure that the primer is thoroughly dry and void of solvent prior to application of the thermoplastic material.
- Ensure temperature of 180 - 200°C and adequate agitation during application.
- Do not hold thermoplastic above 180°C for more than six hours.
- Do not heat the material above 220°C at any point in time.
- Change in color indicates that the material has been scorched owing to overheating and needs to be discarded.
- Drop-on glass beads must be immediately deposited after thermoplastic application.

STORAGE & PACKING

Storage : A shelf life of 12 months when stored in a cool, dry and covered place away from direct sunlight and areas of potential contamination.

Packing : 25 Kg sealed polythene sacks. (Different packaging options available as per the packing norms of the importing country.)



HEALTH & SAFETY

- Thermoplastic Road Marking Paint is non – hazardous.
- Minimize dusting of the material during us
- Use of personal protective equipment like facemask, goggle, heat resistant gloves and protective clothing while handling the material is recommended
- Do not inhale product or fumes; do not ingest
- Avoid eye contact; if contacted, wash copiously with water
- Contact of molten product with skin could lead to thermal burns; flush with cold water; do not remove material as it could lead to severe tissue damage
- Please refer to our Material Safety Data Sheet prior to using the product

OEM Support



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