HOT MELT ADHESIVE

Black Polyamide Hot Melt Adhesive

UA-G185C

UA-G185C is a black polyamide hot melt adhesive in granule form, formulated for low pressure molding (LPM) encapsulation and sealing in automotive, electrical and electronic assemblies. Its melting range is 165–182 °C and its melt viscosity is 5,000–7,000 mPa·s at 210 °C — deliberately heavier than a general-purpose LPM polyamide, because the parts it seals are larger, thicker and often moulded against a vertical wall.

KEY FEATURES

- Opaque black — matches black housings, blocks light for optical and IR sensors, and hides seams, flash and contamination that show through translucent grades
- High melt viscosity, 5,000–7,000 mPa·s at 210 °C — stays where it is placed, resists wicking into wire strands, holds shape on vertical walls
- Low pressure molding — a fraction of conventional injection pressure, so solder joints, wire insulation and MEMS survive encapsulation
- No chemical reaction, no curing oven — the part is solid on cooling and can be demoulded within the cycle, not after hours of cure
- Strong adhesion to engineering plastics and metals — bonds to PA, PBT, FR-4, copper and pretinned surfaces without a primer
- Reworkable — reheat the part and the encapsulant softens, so a failed component is repaired instead of scrapped
- Field-proven applications — TPMS, seat occupant detection boards, belt buckle sensors, motorcycle ECUs, air quality sensors and RF antennas

TECHNICAL SPECIFICATIONS

Property	Value
Chemistry	Polyamide (PA) hot melt adhesive
Model	UA-G185C
Appearance	Black granules
Melting range	165–182 °C
Melt viscosity	5,000–7,000 mPa·s at 210 °C
Recommended process	Low pressure molding (LPM)
Substrates	PA, PBT, FR-4, copper, brass, pretinned wire
Packing	Sealed moisture-barrier bags, pack size confirmed per order
Storage	Cool, dry and sealed; dry before use if moisture has been absorbed

RECOMMENDED PROCESSING CONDITIONS

Step	What to do	Why it matters

Pre-dry	If the granules have been exposed to humid air, dry them before charging the tank	Polyamide is hygroscopic; moisture turns to steam in the melt and shows up as bubbles, voids and weak bonds
Melt	Heat above the top of the melting range until the melt is fully clear and homogeneous; avoid long residence at high temperature	Unmelted crystals act as weak points, while extended heating degrades the polymer and darkens the colour
Mould	Inject at low pressure into a closed mould; the heavier melt tolerates simple gates and larger sections	Low pressure is what protects the assembly; the higher viscosity keeps the melt from flashing past seals
Demould	Open the mould once the part has crystallised and is dimensionally stable	Cycle time is seconds, not hours, so no curing oven or buffer stock is needed
Rework	Reheat the part to soften the encapsulant and remove or repair it	A thermoplastic seal is reversible; a thermoset potting compound is not

PACKAGING AND STORAGE

- Supplied in standard export packaging; roll width, length and liner options confirmed on order.
- Store in a dry, ventilated place below 30 °C, away from direct sunlight, moisture and ignition sources.
- Shelf life: 12 months in unopened original packaging. Reseal opened rolls and use them within the period stated above.

> **Handling note:** Hot melt adhesives are applied molten. Use a suitable dispenser or laminator with accurate temperature control and keep hands clear of the melt and heated surfaces.

The values above are typical test results obtained under standard laboratory conditions and are provided for reference in product selection. They do not constitute a specification or warranty of performance in a particular application, because bonding results depend on substrate, equipment, line speed and ambient conditions. We recommend a trial run on your own production line before commercial use. Shanghai United Industry Co., Ltd reserves the right to revise this document without notice.

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