

STANYL®

PA46 FOR COLORFUL, RELIABLE AND SAFE CONNECTORS

In recent years, global smartphone sales have grown to more than 1.5 billion units. As a result, the consumer electronics connector industry has grown as much as 10% each year. As designs trend toward thinner and less bulky units with faster data transmission rates and greater bandwidth capabilities, the connectors used for power and data transmission need to meet more stringent requirements.

Factors driving the market include new connected home concepts – such as safety and security, smart appliances, utility management, and wellness and monitoring – which are adding to the number of devices in need of connectors. The connector landscape is being shaped by the need for waterproof devices, interchangeability – where the same power adapter and cables can power multiple devices – and ongoing regulation for the elimination of hazardous substances in electronics.



Mobile device manufacturers need durable, reliable and safe connectors. The materials used in this application need to be able to:

- Handle wattages up to 100W and data transmission rates to 10Gbps
- Be molded into components as thin as 0.1mm
- Withstand the high temperatures associated with reflow soldering for surface mount technology
- Be capable of adhesion by laser welding, ultrasonic welding and solvent bonding
- Provide excellent wear through thousands of cycles of insertion and removal
- Provides excellent weld line strength in thin walls
- Substantially reduce the risk of electrical tracking
- Be matched to a wide variety of colors, as required

With high flow grades, Stanyl® provides manufacturers with freedom to design complex components with very thin walls, while increasing productivity with shorter cycle times. In durability testing, Stanyl demonstrates the least wear and much stronger weld lines than competitive materials. As more pins are bundled into smaller connector geometries, resistance to tracking grows in importance. Stanyl has a comparative tracking index (CTI) of 600V, falling within the highest category to improve safety and substantially reduce fire hazard. All Stanyl sales are accompanied by a processing guide created specifically for manufacturing connector components.

STANYL DEMONSTRATES:

- › HIGH FLOW PROCESSING FOR THIN-WALLED COMPONENTS
- › BROAD COLOR-MATCHING CAPABILITY
- › DURABILITY WITH STRONGER WELD LINES AND LESS WEAR
- › ELECTRICAL SAFETY WITH A UL94 V-0 RATING AT 0.2MM AND A CTI OF 600V
- › 25% LOWER CARBON FOOTPRINT THAN LCP



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ELECTRICAL SAFETY

Improved electrical safety for tightly spaced pins with a UL94 V-0 flammability rating at 0.2mm and a CTI of 600V



HIGH-TEMPERATURE RESISTANCE

Heat deflection temperature of 290°C and melting point of 295°C enable Stanyl to withstand the high temperatures associated with processing steps like surface mount technology



COLOR MATCHING

Can be matched to a broad range of colors that don't degrade during high-heat processing and assembly steps



ENVIRONMENTAL SUSTAINABILITY

25% lower carbon footprint than liquid crystal polymer (LCP)

DSM ENGINEERING PLASTICS

In close partnership with our customers, we develop innovative high performance engineering plastic solutions for a smarter world.

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www.dsm.com/plastics

or contact us directly via
www.dsm.com/contactdep

DSM – Bright Science. Brighter Living.™

Royal DSM is a global science-based company active in health, nutrition and materials. By connecting its unique competences in life sciences and materials sciences DSM is driving economic prosperity, environmental progress and social advances to create sustainable value for all stakeholders simultaneously. DSM delivers innovative solutions that nourish, protect and improve performance in global markets such as food and dietary supplements, personal care, feed, medical devices, automotive, paints, electrical and electronics, life protection, alternative energy and bio-based materials. DSM and its associated companies deliver annual net sales of about €10 billion with approximately 25,000 employees. The company is listed on Euronext Amsterdam. More information can be found at or www.dsm.com. ©DSM 2019

