

Natpet Schulman – A Specialty PP compounds: Unique Solutions for Appliances and Electrical Industry

Natpet Schulman Specialty Plastics Compounds (NSSPC), a Saudi Based company with parentage from National Petrochemical Industrial Company (NAPET) – a leading PP producer and A Schulman (Now Lyondell Basell) – world biggest PP compounder.

NSSPC is the first IATF 16949 compliant organization, having largest PP compounding facility in GCC region with installed capacity of 100,000 tons/pa.

In Sri Lanka, we along with Acteil Innovative Solutions (Pvt) Ltd started marketing our specialty PP compounds in 2019 and have been able to deliver value-based solutions to customers across the industries.

Few case studies are presented in this journal, for benefit of readers as per below:

NSSPC PP Specialty compound for Home Appliances, as a low cost substitution to Styrenics – ABS/HIPS:

PP compounds is widely considered as cost reduction solutions in appliances.

There have been many advances in the development of polypropylene compounds such as high gloss, rigidity and heat performance gained through new filler and polymer technology.

Flow and shrinkage analyses have now provided appliance designers with the freedom to use polypropylene compounds.

NSSPC offers solutions with products having good gloss, rigidity, hardness and balanced mechanical properties which can be used to replace styrenics mainly ABS, HIPS in appliances.

Industry : Home Appliances & EE.
Comparison between ABS and PP Compounds

Key Features	ABS	PP Compounds
Soap, Detergent resistant	Bad to Fair	Excellent
Colourability	Good	Excellent
Fatigue Resistant	Poor	Excellent
Scratch Resistant	Fair	Good
Dimensional Stability	Excellent	Good
Gloss	Very good	Comparable
Cost Benefits	No	Yes...

Key properties	ABS	PP
Density (g/cm ³)	1.04 to 1.4	0.91 to 1.2
Elongation (%)	3.5 to 50	3.0 to 80

❖ Cost effective solution – NSSPC



NSSPC PP Specialty compound for Electrical Industry to Substitution for Polyamide Compounds:

Electricity powers almost every aspect of our lives, at home and in our jobs, at work and at play and everywhere that we find electricity, we also find plastics.

In the kitchen, there are the labor-saving devices that we wouldn't be without; JMG, microwave ovens, kettles etc.

In the living room is the television, the video or the music system, while at work, we may use a computer, a fax machine or a telephone.

Plastics make progress possible, making electrical goods safer, lighter, more attractive, quieter. more environmentally friendly and more durable.

Plastics fall into two broad categories: thermoplastics such as polypropylene, which can be repeatedly melted down and remolded and thermosets such as urea formaldehyde which, once set, cannot be re-melted, making them suitable for applications where heat is encountered.

However, with advancement in design – to meet the safety as well as aesthetics, elegant looking needs of consumers, thermoplastics have found wider usage in this industry which otherwise was dominated with thermosetting plastics 10-15 years ago.

With changing needs, expectation from thermoplastics are much stiffer – supporting safety needs, environment friendly as well as design solutions.

To meet such requirements, NSSPC offers specialty PP compound for Electrical and Electronic application competing to Polyamide (Nylon 6 and 66) compounds with many advantages.

Polyflam range of PP – Flame retardant compound offers balanced properties, halogen free (environment friendly) and copper contact stabilization (to prevent the oxidation/ degradation of material when exposed to contact with copper). These unique property combinations along with cost-effectiveness attracts electrical industry to use PP compounds over conventional Halogen/Phosphorous base Nylon 6 and 66 compounds.

Industry : Electrical (Switch Housing, Connectors, Boxes etc)

Electrical Property Comparison - PA 66 and PP Compounds

Key Features	PA 66 Compounds	PP Compounds
Surface, Volume resistivity	Fair	Excellent
Surface Resistivity at lower temp.	Poor	Excellent
CTI	Fair	Excellent
LOI	Good	Excellent
Olive Wire Test/PR Rating	Good	Excellent
Copper Contact Resistance	Poor	Excellent
Moisture Absorption	High	Low
Cost Benefits	No	Yes...

Key properties	PA 66	PP
Density (g/cm ³)	1.17 to 1.4	0.91 to 1.26

Properties ability - PA 66/PP vs PA 66/PP	PA 66	PP
Fire Retardant	Yes	No
Energy Saving	No	Yes
Strongly Corrosive	No	Yes
Moisture	High	Low
Thermal stability	Excellent	Good
Dimensional Stability	Excellent	Good

• Technically advanced solution for Electrical Industry



More details of these products and other offerings from NSSPC can be had from our business associate in Sri Lanka.

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