



# TPE SOLUTIONS PRODUCTS & CAPABILITIES

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## Your One Stop Shop for TPEs

TPE Solutions, Inc. specializes in both off-the-shelf and custom TPE products, offering a broad range of solutions tailored to the unique chemistry and properties required by your application. We offer an unbiased selection of TPE technology to allow the best price and performance options.

Founded by Jonas Angus, a TPE industry veteran with over 40 years of experience, TPE Solutions, Inc. is your trusted partner for all TPE-related projects, no matter the complexity.

## Markets Served

- Medical Devices (USP Class VI)
- Food Manufacturing (FDA)
- Industrial/Construction
- Wire & Cable
- Fluid & Gas Delivery Systems
- Automotive
- Electronics/Semi-Conductors
- Aerospace
- Military & Defense
- Containment Room Systems
- Laboratory Sciences



# Our Product Offerings

## Thermoplastic Compounds & Resins

- **Nexprene® TPV** (EPDM/PP): equivalent to Santoprene or Sarlink
- **SoftLink®**: proprietary custom elastomer alloys (Shore 15A to 55D)
- **SoftFlex**: Proprietary SEBS compounds (Shore 25A to 90A)
- **COPE**: Equivalent to Hytrel, Keyflex, Skypel, Arnitel
- **COPEnhance**: COPE with improved heat stability, FR, UV resistance, or a combination of the above
- **COPEplus**: specialty line of highly concentrated FR, AO and/or UV masterbatches for COPE compounds
- **HTPV (High Temp TPVs)**: proprietary COPE based TPV with exceptional service temp tolerance, high creep and chemical resistance

- **Conductive & Flame Retardant Compounds**: Surface Resistivity Range of 10e01 to 10e04 ohm/sq
- **Anti-Stat (ESD) Compounds**: SR Range of 10e04 to 10e12 ohm/sq
- **Pexidan**: Moisture cure XLPE
- **TPU**: equivalent to Elastolan, Estane, Ravathane. ESD available. Also available in sheets and films.
- **Alcryn (MPR)**: chlorinated polyolefin with oil resistance. Nitrile Rubber replacement
- **Maxamid**: filled and unfilled PA6 and PA66 (nylon)
- **Filled PP & TPO Compounds**
- **Styrenic Block Copolymers**: SBS/SEBS
- **Concentrates and Masterbatches**: for color, UV, AO, FR

## Additives & Masterbatches

Additive	Typical Loading Ranges (%)	Additive	Typical Loading Ranges (%)
Conductive Black	2 to 20	Flame Retardant Masterbatches	20 to 60
Activated Carbon Black	2 to 25	UV Masterbatches	10 to 60
Carbon Fiber	5 to 40	Heat / Antioxidant Masterbatches	10 to 60
Nano Carbon	1 to 20	Processing Aids Masterbatches	10 to 60
Clay	5 to 30	Custom Color Masterbatches	1 to 60
Graphite / Graphene	5 to 30	Antimicrobial Masterbatches	5 to 40
ESD / IDP Polymers	5 to 30	Slip / Lubrication Aids	1 to 10
Glass Fiber	10 to 50	Siloxane / Silicone	1 to 10
Hollow Glass Spheres/Bubbles	5 to 30	Impact Modifiers	5 to 20
Barium Sulfate (BaSO <sub>4</sub> )	5 to 60	Antistatics	1 to 10
Bismuth Subcarbonate (Bi <sub>2</sub> O <sub>2</sub> (CO <sub>3</sub> ))	10 to 60	Clarifying Agents	1 to 25
Bismuth Oxychloride (BiOCl)	10 to 60	Fragrance Masterbatches	Application Specific
Bismuth Trioxide (Bi <sub>2</sub> O <sub>3</sub> )	10 to 75	Crosslinking	
Strontium Titanate (SrTiO <sub>3</sub> )	10 to 60	Barrier Properties	
Tungsten	10 to 92	Overmold / Bonding	
Mineral Filled	20 to 60	3D Printing	
Heavy Metal Filled	20 to 96	Laser Marking	



## Extruded Films & Sheets

TPE Solutions, Inc. can now supply extruded films and sheets in a variety of chemistries, colors, and sizes.

We have customers in many industries including food manufacturing, laboratory sciences, containment room systems, aerospace, and tech. See below for a summary of current offerings. We are able to accommodate many custom specifications as well.

<b>Compounds</b>	Most TPE types (TPU, TPV, COPE, SEBS, TPO, etc.)
<b>Film/Sheet Thickness</b>	0.015" to 0.060" film Up to 0.500" sheets
<b>Film/Sheet Width</b>	6" to 54"
<b>Available Features</b>	A-B Construction Double Layer (different chemistries and/or colors)
<b>Color</b>	All colors including clear and tinted transparent films

## Equipment Capabilities

### Production Equipment

- Twin Screw Extruders
  - Sizes (mm): 20, 32, 35, 40, 60, 75
- Continuous Mixers
- Underwater Pelletizers
- Strand Pelletizers
- Air Cooled Pelletizer
- Sheet/Film Extruder
- Pulverizers
- Grinders
- Ribbon Blender
- Dessicant Dryers

## Lab Capabilities

### Conformance Testing

- Melt flow analysis
- Moisture content analysis
- Tensile and Elongation
- Tear Strength
- Hardness
- Rheology
- Flex Modulus
- Density / Specific Gravity
- Abrasion Resistance
- TGA, DSC, FTIR
- Surface & Volume Resistivity
- High Resolution Digital Microscope - Dispersion Measurement
- Color spectrophotometer
- Strip die extrusion
- Lab Vacuum Oven



## How We Work

At TPE Solutions we start by analyzing the end-use characteristics of our customer's product as well as their manufacturing processes.



Once we fully understand the requirements of the application, we identify suitable material solutions. Sometimes it is an off-the-shelf chemistry, sometimes it is an alloy, and sometimes we help to engineer a totally custom compound.



Finally, using our vast network of suppliers, we seek the most efficient compounding facility based on our customer's volume, geographic location and other technical needs.

Additionally, we can provide technical support to help our customers incorporate the TPE into their production process. No other TPE compounder can offer you the same selection and expertise to achieve the best results for your application.



## Let's Work Together

We'd love to hear from you!  
Whether you're ready to collaborate on a new project or  
want to improve your current products and processes,  
reach out to our team to get started!



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