



## FACT SHEET FOR THE PRESS

*Updated October 2008*

**TEKNOR APEX COMPANY** is an international polymer technology company and one of the world's leading custom compounders of plastics materials. For U.S. markets, the company also manufactures chemicals such as plasticizers and the nationally branded consumer product, Apex® garden hose. Teknor Apex was established in 1924 and is privately held. It is headquartered in Pawtucket, RI, U.S.A., operates manufacturing facilities around the world, and sells in 90 countries.

Five of the seven Teknor Apex business units focus on plastics compounding. The company's sales and manufacturing operations in the U.S. serve customers throughout the Americas. Subsidiaries in China, Singapore, and the United Kingdom serve customers in Asia, Africa, the Mideast, and Europe.

Visit Teknor Apex Company at [www.teknorapex.com](http://www.teknorapex.com)

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### **Teknor Apex Company: Greater than the Sum of Its Parts**

Teknor Apex Company is known for technological depth and commitment to custom manufacturing. The company consistently invests in research to develop new products and help customers meet challenges arising from emerging regulations or changes in the marketplace. Teknor Apex enjoys long-term relationships with many customers as a result of its responsiveness, reliability, technical support, and quality assurance.

Teknor Apex is unique for its emphasis on developing synergy among its diverse businesses and carrying out strategic acquisitions and expansions that increase the potential for such synergy. This strategy has generated a number of important advantages for customers:

- **Market expertise.** Teknor Apex draws on a database of more than 40,000 compound formulations and has amassed company-wide expertise in major compound markets like automotive, consumer and industrial products, medical devices, and wire and cable.

- **Single-sourcing of materials.** Teknor Apex supplies multiple product lines for many markets. This simplifies purchasing for customers and broadens their options for identifying the best materials for an application.

- **Worldwide product uniformity.** A corporate commitment to full technology transfer has made it possible for customers that operate internationally to source precisely the same compounds from Teknor Apex manufacturing locations across the U.S. and in Asia and Europe.

- **Standards compliance.** Materials developed by Teknor Apex in the U.S. are pre-compliant with international codes and standards regardless of where they are sourced. In addition, Teknor Apex maintains a technical staff that works with government agencies and regulatory bodies to certify that new compounds are compliant, saving customers expense and lead time.

- **Technical support.** The combined technical resources of Teknor Apex operations are available to support customers of any of the company’s divisions. These include materials research and analysis, application development, color control, and process engineering.

## Operations in the Americas, Europe, and Asia

Teknor Apex Company is a longtime supplier of custom compounds to American and international customers and maintains worldwide operations (see table below). Supplementing the company’s business units is an international network of representatives. Teknor Apex has three international subsidiaries. In order of establishment they are:

- **Singapore Polymer Corporation (SPC).** Founded in 1969 and acquired by Teknor Apex in October 2001, SPC is a leading supplier of thermoplastic compounds, color concentrates, and additive masterbatches in the Asia-Pacific region. Its new headquarters facility in Singapore includes two compounding plants with a combined nominal capacity of 70,000 metric tons (155 million lb.) per year. The plants, laboratories, and offices on the site occupy 28,160 sq.m (300,000 sq.ft.), leaving another 10,540 sq. m (113,000 sq.ft.) for possible expansion. Laboratory facilities at the site are equipped for a wide range of property and compliance testing, material analysis, and color matching. There is a pilot

<b>TEKNOR APEX PLANTS IN THE U.S., ASIA, AND EUROPE</b>		
<b>Location</b>	<b>Compounding Activity</b>	<b>Other Operations</b>
Pawtucket, RI	Vinyl, TPEs	World Headquarters, <u>Teknor Apex Company</u> ; R&D Labs
Brownsville, TN	Vinyl, TPEs, ETPs	Garden Hose, Chemicals
Fountain Inn, SC	Vinyl	Garden Hose
Hebronville, MA	Colorants	Chemical Distribution; Analytical Lab
Henderson, KY (Two Plants)	TPEs, Colorants	
Industry, CA	Vinyl	Vinyl Calendering
Jacksonville, TX	Colorants, Specialty Compounds	Dry Blending
St. Albans, VT	TPEs, Specialty Compounds	
Singapore	Vinyl, TPEs, ETPs, Colorants, Specialty Compounds	Headquarters, <u>Singapore Polymer Corp.</u> ; R&D Labs
Suzhou, China	Vinyl	Headquarters, <u>Teknor Apex Suzhou</u>
Oldbury, UK	ETPs, TPEs	Headquarters, <u>Teknor Apex UK Ltd.</u>

plant for product development. Besides supplying compounds developed by Teknor Apex, SPC offers a wide range of other products, including vinyl, TPE, polyolefin, and other compounds, plus color and additive masterbatches.

- **Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.** was established in 2007 and operates a compounding plant in Suzhou, China. The initial nominal capacity of the two compounding lines in the plant is 14,000 metric ton (30.8 million lb.). These lines are used for producing flexible vinyl products like those developed in the U.S.A. by Teknor Apex and in Singapore by SPC. Lines to be added will expand production to TPEs and ETPs, along with rigid vinyl and specialty compounds.

- **Teknor Apex UK Ltd.** is the first compounding unit of the holding company **Teknor Apex UK Holdings Ltd.**, established in 2008 to serve customers throughout Europe. Teknor Apex UK is headquartered in Oldbury, West Midlands, UK at the site of a Chem Polymer compounding plant for engineering thermoplastic (ETP) compounds. Teknor Apex acquired Chem Polymer in 2004. Teknor Apex UK produces ETP and TPE compounds at the facility, having started up TPE production in 2008.

## Vinyl Division of Teknor Apex

A pioneer in the field of flexible vinyl, Teknor Apex manufactured its first PVC compounds in 1946. Today the Vinyl Division produces thousands of specialty and general-purpose compounds, which are available in custom and standard formulations and supplied in a broad spectrum of colors. In addition, the division produces a range of specialty rigid PVC compounds.



The PVC resins used in manufacturing flexible vinyl compounds gain their flexibility through the addition of plasticizers, many of which are manufactured by the Teknor Apex Chemical Division. The resulting compounds incorporate other modifiers besides plasticizers and exhibit degrees of flexibility ranging from soft and supple to semi-rigid.

Vinyl Division products for specific major markets are discussed in subsequent sections of this fact sheet dealing with **automotive**, **medical**, and **wire and cable**. The chief vinyl compound brands supplied by Teknor Apex for all applications are:

- **Apex®** flexible and rigid vinyl compounds are used in all major vinyl markets. Formulations range from all-PVC grades to blends and alloys of PVC with polyurethane and other polymers. Apex products are available in custom or standard colors, gloss or matte finishes, and opaque or clear grades.

- **Flexalloy®** vinyl elastomers are based on ultra-high-molecular-weight (UHMW) PVC and proprietary formulations of other ingredients. Flexalloy products provide the elasticity and low-temperature toughness of TPEs, plus vinyl benefits like transparency and flame retardancy. A series of vinyl/elastomer blends called **Flexalloy OR®** exhibit outstanding resistance to swelling or disintegration when exposed to oils, fats, and aggressive fluids.

The Vinyl Division supplies compounds for a host of molding and extrusion applications. Some of the markets it serves are shown on the following table:

<b>Appliances</b>	<b>Automotive</b>	<b>Building &amp; Construction</b>
<b>Electrical &amp; Electronics</b>	<b>Food &amp; Beverage</b>	<b>Flooring</b>
<b>Footwear</b>	<b>Furniture</b>	<b>Hose</b>
<b>Housewares</b>	<b>Medical</b>	<b>Packaging</b>
<b>Toys</b>	<b>Wire and Cable</b>	<b>Other Consumer &amp; Industrial</b>

## Thermoplastic Elastomer Division of Teknor Apex

The Thermoplastic Elastomer Division supplies the widest range of TPE types available from an independent compounder, including seven generically different product ranges comprising polyolefin, styrenic, and vulcanizate formulations.

Some major markets served by the Thermoplastic Elastomer Division are shown in the table below. Products for *automotive*, *medical*, and *wire and cable* markets are discussed in subsequent sections of this fact sheet dealing.



The chief TPE compound brands supplied by Teknor Apex are:

- **Elexar®** styrene block copolymer compounds combine superior electrical properties with flexibility and toughness. They are used in a wide range of power, communications, and data cable, as well as in injection molded plugs and connectors.

- **Monprene®** compounds, a diverse family of styrenic block copolymer products incorporating hydrogenated isoprene rubber, include these series: high-toughness grades for applications like wheels and swim fins; super-soft gel formulations for medical, foot-care, and other uses; translucent/dry-to-the-touch compounds; water-clear/high-tack/high-resilience materials; and filled general-purpose products.

- **Telcar®** thermoplastics olefins (TPOs) are polyolefin/rubber blends that provide rubberlike performance and appearance, tear strength, and resistance to heat aging and ozone. They are used in automotive ducts, hoses, knobs, strut covers, and airbag covers, as well as weatherstripping, syringe bulbs, and many other applications.

- **Telcar® OBC** compounds are advanced TPO formulations in which the rubber component is an INFUSE® olefin block copolymer from the Dow Chemical Company. These products exceed by a wide margin the performance and softness limitations of conventional TPOs and exhibit processing and physical property advantages over a wide range of other TPEs.

- **Tekbond™** compounds, based on styrene-butylene-ethylene-styrene (SEBS), can be over-molded directly onto a wide range of rigid substrates, achieving strong bonds to polycarbonate (PC), ABS, PC/ABS alloys, acrylic, cellulose propionate, nylon 6,6, and PCT polyester. Typical uses include “soft-touch” grips and handles, seals, and other components for markets like appliances and automotive.

- **Tekron®** styrene block copolymer compounds are versatile products whose formulations cover an exceptionally wide range of hardness, flexural modulus, and elongation. These tough, flexible

<b>Appliances</b>	<b>Automotive</b>	<b>Building &amp; Construction</b>
<b>Caps &amp; Closures</b>	<b>Electrical &amp; Electronics</b>	<b>Footwear &amp; Foot Care</b>
<b>Housewares</b>	<b>Medical</b>	<b>Oral Care</b>
<b>Sporting Goods</b>	<b>Toys</b>	<b>Wheels &amp; Casters</b>
<b>Wire &amp; Cable</b>	<b>Writing Instruments</b>	<b>Other Consumer &amp; Industrial</b>

products are used in many automotive applications. Special scuff- and mar-resistant formulations are available to cut the cost of automotive airbag covers by eliminating the need for painting.

- **Uniprene®** thermoplastic vulcanizates (TPVs) are high-performance compounds that contain a highly crosslinked elastomeric phase (typically EPDM rubber) finely dispersed in a thermoplastic matrix (typically polypropylene). The crosslinked phase provides greater elasticity and thermal stability than

many other TPEs; the matrix renders the compounds melt-processable on standard plastics equipment. Applications include automotive and appliance components, wire and cable, and many other consumer and industrial products. *Uniprene XL* compounds, with a rubber phase of modified hydrogenated styrene block copolymer, are even higher in performance, filling the gap between standard TPVs and more expensive engineering TPEs.

## Engineering Thermoplastics Division / Chem Polymer

The ETP Division of Teknor Apex, also widely known as Chem Polymer, has over 30 years of experience as a supplier to major international OEMs in the automotive, building and construction,



consumer products, electrical and electronics, and other markets, as well as in specialty sectors like wire coating. Teknor Apex acquired Chem Polymer in 2004. Chief among the compound ranges available from the division are nylon 6, 66, 66/6 copolymer, 6/10, and 12 products sold under the *Chemlon®* and *Beetle®* tradenames; polybutylene terephthalate (PBT), polyacetal copolymer (POM), and polyethylene terephthalate (PET).

Performance-enhancing formulations in the ETP Division / Chem Polymer portfolio include:

- **Reinforced** with glass fibers, glass beads, or carbon fibers at up to 50% by weight.
- **Mineral-filled** with clay, talc, wollastonite, chalk, or barium sulfate at up to 60%.

- **Wear-protected** by graphite, molybdenum disulfide, PTFE, or silicone.
- **Flame retardant** using halogen or halogen-free technologies.
- **Modified** for impact resistance, higher flow, enhanced surface finish, etc.
- **Combinations** of the above technologies.
- **Precolored**—a longtime specialty of Chem Polymer.

ETP products used in the *automotive* industry are discussed in a subsequent section of this fact sheet. Another major market for these compounds is that of *electrical and electronics* applications, where the ETP Division offers a wide range of products based on proprietary flame retardant formulation technology, including non-halogenated systems. The company's Chemlon nylon compounds are widely used for connectors and terminal blocks, switch gears, coil bobbins, timers, wall plates, receptacles, plugs, and electrical housings and enclosures.

## Teknor Color Company

Teknor Color Company produces colorants for injection molding, blow molding, rotational molding, extrusion, and calendaring. Its products, available in standard colors and an unlimited number of custom formulations, include:



**Color concentrates** in pellet, microsphere, bead, cube, granule, powder, and pulverized forms. Many FDA and non-heavy metal formulations are available.

**Package concentrates** combining colors with antioxidants, antistats, blowing agents, flame retardants, impact modifiers, lubricants, UV inhibitors, and other additives.

**Pre-colored compounds** in pellet or pulverized form, produced on a custom or toll basis.

Drawing on more than a half-century of experience in plastics, Teknor Color Company formulates concentrates for use with virtually all commercial thermoplastics,

including polyolefins, styrenics, vinyls, elastomers, and engineering resins. The company operates three production facilities in the U.S., each maintaining a staff of color scientists and a fully equipped laboratory that is linked to a central data base to assure product consistency from location to location.

In addition to a wide range of general-purpose color concentrates, Teknor Color supplies many colorants for *special effects* such as fluorescent, holographic, jelly color, metallic, neon edge-glow, frosted, pearl, sparkle, and speckle. Teknor Color has also developed three Super Concentrate™ products that are especially cost-effective because of high pigment loadings:

- **Ultracolor Concentrates.** Produced in bead form, these products have pigment loadings of 50 to 75% and permit letdown ratios of 100:1 or higher, compared with the 25:1 to 33:1 ratios for concentrates with conventional loadings in the 20 to 50% range.

- **TEKlite® Color Crystals™.** These crystals have unique shapes that facilitate metering, high pigment loadings (50 to 75%), and compatibility with a wide range of thermoplastics--important when parts made from different resins must have matching color.

- **TEKlite® Color Spheres™.** Only 1/32 in. (0.79 mm) in diameter and with pigment loadings at 75%, these concentrates can sometimes be used at resin-to-concentrate ratios as high as 300:1, making possible lower concentrate costs than with conventional 1/8-in (3.18 mm) beads at 25:1.

Teknor Color Company products for *wire and cable* are discussed in a subsequent section of this fact sheet. For the *packaging* market, the company manufactures colorants for all thermoplastics in current use. Teknor Color also provides packaging customers with extensive product-development support, including a pilot plant to serve manufacturers of PP, PE, and PET bottles of all types. Included are capabilities for blow molding single- and multi-layer PE and PP bottles and injection molding PET performs for standard packaging.

One example of a special effect colorant for packaging is *MetaLustre™ color concentrates*, which impart a luxuriously metallic look and provide a uniform appearance in all of the packages in a merchandiser's product line.

Some of the major markets supplied by Teknor Color Company are:

<b>Appliances</b>	<b>Automotive</b>	<b>Building &amp; Construction</b>
<b>Food &amp; Drug Packaging</b>	<b>Health &amp; Beauty Aid Packaging</b>	<b>Housewares</b>
<b>Materials Handling</b>	<b>Medical</b>	<b>Personal Care Products</b>
<b>Retail Displays</b>	<b>Safety Items &amp; Garments</b>	<b>Sporting Goods</b>
<b>Toys</b>	<b>Wire &amp; Cable</b>	<b>Other Consumer &amp; Industrial</b>

## **Teknor Specialty Compounding**

Teknor Specialty Compounding is a diversified toll and custom manufacturer of thermoplastic compounds and additive blends. The division serves as a resource for customers requiring an independent, confidential provider of production capacity, formulating experience, and process expertise. Teknor Specialty Compounding manufacturing capabilities include:

- **Extrusion compounding** for all major commodity and engineering resins, including ABS, polyamides, polycarbonate, polyesters, polyolefins, polystyrene, and thermoplastic polyurethane.

- **Powder and additive blending** of up to seven dry powders and two liquids. Additives blended include antimicrobials, antioxidants, antistats, flame retardants, glass fillers, heat stabilizers, impact modifiers, mineral fillers, and UV stabilizers.

- **Pulverizing** to produced powder ingredients.

Teknor Specialty Compounding draws on Teknor Apex's extensive experience in plastics and elastomer compounding and color and additive blending. It utilizes all of the manufacturing facilities of Teknor Apex, including its analytical laboratories.

## **AUTOMOTIVE: Single Source of Compounds for Many Components**

Drawing on three product divisions with many years of experience serving OEMs and component manufacturers, the Teknor Apex automotive team can help customers streamline product development and purchasing procedures by relying on Teknor Apex as a single source for many compounds.

Separately, the Vinyl and Thermoplastic Elastomer Divisions have amassed years of experience in serving the auto industry, including many OEM approvals and a wide array of applications. Their specialty is *flexible and elastomeric materials* that provide interior comfort and ergonomics, surface



texture and styling, driver and passenger safety, fluid and air seal integrity, energy and vibration management, electrical insulation and shielding, oil and grease resistance, and component color compatibility. The Engineering Thermoplastics Division, operated as Chem Polymer when Teknor Apex acquired the business in 2004, also has extensive automotive experience—in fact, automotive is its largest U.S. market. Its specialty is *engineering compounds*. The division's nylon compounds have been used in hundreds of applications.

• **Vinyl Division.** Apex® compounds are mainstays in

instrument panel skins; interior trim; seals and gaskets; window encapsulations; over-molded levers, knobs, and grips; scuff plates; body side moldings; and SAE wire jacketing. High-performance Flexalloy® vinyl elastomer products include grades that provide resistance to grease, oil, and aggressive fluids in demanding automotive applications.

• **Thermoplastic Elastomer Division.** Commercial applications of Teknor Apex TPEs include ducts, hoses, knobs, strut covers, airbag covers, grips, gaskets, seals, wheel well liners, instrument panel skins, and interior and exterior trim.

• **Engineering Thermoplastics Division.** Chemlon® and Beetle® nylon compounds have been used in these applications: 1) power train / under hood, including engine and transmission, air induction system, and cooling system components, as well as connectors; 2) chassis / mechanical, including pedal and gearshift, braking and suspension, and steering system components, plus electrical housings, connectors, and fasteners; and 3) interior and exterior, including door, seating, wiper, and airbag system components, mirror housings and brackets, roof rails, and wheel covers.

Approvals and specifications of Teknor Apex automotive compounds by international OEMs are listed for each of the three divisions at [www.teknorapex.com](http://www.teknorapex.com).

## **MEDICAL: Comprehensive Vinyl and TPE Ranges**

Teknor Apex has four decades of experience as a supplier of compounds to medical manufacturers. The company's selection of rigid, semi-rigid, flexible, and elastomeric medical-grade materials is broad enough to provide designers and processors with multiple alternatives.

The company's extensive medical-market experience has resulted in these assurances for manufacturers: 1) compound purity—Teknor Apex manufactures its compounds on production lines strictly for medical use and maintains laboratories with advanced analytical capabilities; 2) traceability and consistency—Teknor Apex maintains complete records of all raw materials and production runs, provides certificates of analysis for each shipment, and makes no changes in formulation, ingredient sourcing, or production line without express written permission from the customer; and 3) codes and

standards compliance—The Teknor Apex staff of regulatory experts works with government agencies and standards bodies to certify that compounds meet requirements for U.S. and international markets.



The VINYL DIVISION OF TEKNOR APEX is unique among suppliers of medical-grade PVC compounds in being basic in two important raw materials: *plasticizers* (produced by the Teknor Apex Chemical Division) and *colorants* (produced by Teknor Color Company). Teknor Apex offers medical manufacturers the advantage of choosing among a wide range of phthalate and non-phthalate formulations. Plasticizer options include non-migratory, lipid-resistant, citrate-based, trimellitate-based, adipate-based, low-odor, or even custom-synthesized plasticizer molecules.

Among the wealth of *Apex® vinyl* medical compounds offered by the Vinyl Division are:

- Gamma sterilization- and e-beam-resistant compounds.
- Alloys of PVC with nitrile rubber or thermoplastic polyurethane, with enhanced properties like abrasion resistance, ultimate elongation, or hot melt strength for blow molding.
- Conductive and anti-static compounds.

- Lipid-resistant compounds for devices in contact with lipid-based drugs.
- Compounds with non-migratory plasticizers, to avoid crazing in adjacent parts.
- Radio-opaque compounds for X-ray opaque applications.

For high-performance and specialty applications, Teknor Apex has also developed a medical-grade series of its *Flexalloy® vinyl elastomers*. Compression set resistance, rapid spring-back, low-temperature toughness, and hot melt strength are key characteristics—properties needed in applications like peristaltic pump tubing, resuscitator bags, non-kink tubing, and blow molded parts.

Teknor Apex also produces *calendered vinyl film* for flexible applications such as solution bags, hot and cold packs, ID bracelets, and inflatables.

The THERMOPLASTIC ELASTOMER DIVISION OF TEKNOR APEX offers the widest range of TPE types available in medical grades, including styrenic, olefinic, and vulcanizate compounds. These types are now available as part of a comprehensive medical manufacturing program tradenamed Medalist™. Designed to serve as a single source of TPE materials and technical support for designers and processors of medical devices, the Medalist program comprises a wide range of compounds tested for compliance with ISO 10993-5 cytotoxicity standards and free of animal-derived materials, vinyl, phthalates, latex, and additives not directly required for medical applications.

The initial range of Medalist compounds is extensive. Shore A hardness spans an unusually broad range, from 5 to 87. Clear, translucent, and opaque formulations are available. The compounds fall into three series: *Versatile Series (MD-100)*, whose widely differing grades meet many requirements encountered in medical manufacturing; *Resilient Series (MD-200)*, formulated for enhanced toughness, oil-resistance, or heat-resistance; and *Bondable Series (MD-300)*, for over-molding onto a variety of thermoplastic substrates.

## WIRE & CABLE: Vinyl, TPEs, and Colors for Every Application

In more than six decades as a supplier to wire and cable manufacturers, Teknor Apex Company has developed compounds for every type of insulation, jacket, plug, and connector application in the industry (see table on next page). Its database includes many thousands of custom and standard *vinyl (PVC)*, *thermoplastic elastomer (TPE)*, and *color concentrate* formulations. Teknor Apex laboratories

provide valuable customer support by carrying out most tests required for compliance with ASTM, UL, NEMA, CSA, ISO, SAE, and other industry codes and standards. Virtually any of the company's products is now available in a RoHS-compliant formulation.

Appliance Wire	Audio/Video Cable	Automotive Wire
Building Wire	Control Cable	Communications Cable
Data Cable	Fiber Optic Cable	Fire Alarm / Security Cable
Fixture Wire	Flexible Cords	Machine Tool Wire
Marine Cable	Medical Cable	Power Cable
Shipboard Cable	Submersible Pump Cable	Welding Cable

The VINYL DIVISION OF TEKNOR APEX is a pioneer in the application of plastics to wire and cable, having produced its first vinyl products in 1946. The polyvinyl chloride (PVC) resins used in manufacturing vinyl compounds are made flexible with plasticizers, many of which are manufactured by the Teknor Apex Chemical Division.

- **Apex®** vinyl compounds make up the broadest and most widely used range of wire and cable products. Teknor Apex offers more than 200 standard Apex products and maintains a database of over 14,000 Apex formulations.

- **Fireguard®** low-flame, low-smoke compounds meet and exceed all applicable UL requirements pertaining to applications in copper and fiber optic plenum cables used in commercial buildings.



- **Halguard®** halogen-free flame retardant products are low-smoke compounds suitable for cables used in appliances, computer interconnect, and central office switching equipment.

- **Flexalloy®** vinyl elastomers based on ultra-high-molecular-weight (UHMW) PVC provide rugged performance under aggressive environmental conditions. With a brittle point of -50°C and a high temperature rating of +105°C, Flexalloy compounds stay flexible, withstanding extreme cold, searing heat, and wet environments without cracking, softening, or compromising the integrity of the cable. These compounds can be used for both insulation and jacketing.

- **Specialty products** include Vidux® conductive vinyl, Polydux® conductive polyolefin, FreeFlex™ plasticizer-free vinyl, and custom-formulated compounds based on blends and alloys with nitrile rubber, thermoplastic polyurethane, and other polymers.

The THERMOPLASTIC ELASTOMER DIVISION OF TEKNOR APEX supplies three product lines for the wire and cable industry:

- **Elexar®** styrene block copolymer compounds combine superior electrical

properties with flexibility and toughness. They are used in a wide range of power, communications, and data cable, as well as in injection molded plugs and connectors. With brittle points as low as -100 °C, and continuous operating temperatures UL rated for 105 °C and 125 °C, these Elexar compounds are excellent for applications spanning a wide temperature range.

- **Telcar®** thermoplastic olefins (TPOs) are polyolefin/rubber blends that provide rubber-like feel and physical properties and resistance to heat aging and ozone. They are available in flame-retardant grades for both fiber optic and copper cable applications.

- **Uniprene®** thermoplastic vulcanizates (TPVs) consist of dynamically crosslinked elastomers in a polyolefin matrix. TPVs exhibit a wide service temperature range (-60 °C to +135 °C). Uniprene TPV compounds perform, appear, and feel like vulcanized rubber, and they are available in hardnesses of Shore 45A to 50D.

**TEKNOR COLOR COMPANY.** While many suppliers of wire and cable compounds offer products only in natural color or black, Teknor Apex Vinyl and TPE Divisions work closely with Teknor Color Company as a source of color concentrates and pre-colored compounds for every type of functional and aesthetic requirement. Teknor Color's standard lines of Munsell colors are fully RoHS-compliant in formulations for PVC, Fireguard low-smoke PVC, polyethylene, EVA, and copolyester elastomers.

With a longtime specialization in products for wire and cable, Teknor Color Company has expertise in selecting pigments to meet application-specific requirements such as electrical performance, durability, weathering, and chemical interaction. Teknor Color innovations have included concentrates whose high degree of uniformity and coloring efficiency enable customers to run faster and thinner while still maintaining excellent electrical properties and product appearance.

## **For More Information**

### **WORLD HEADQUARTERS**

Teknor Apex Company's world headquarters is at 505 Central Avenue, Pawtucket, RI 02861 U.S.A. Tel: 1-401-725-8000. Tel. from U.S. only: 1-800-556-3864. Email: [info@teknorapex.com](mailto:info@teknorapex.com). Visit [www.teknorapex.com](http://www.teknorapex.com).

### **PRODUCT DIVISIONS**

**Vinyl Division:** Tel: 1-401-725-8000. Tel. from U.S. only: 1-800-554-9892. Fax: 1-401-729-0166. E-mail: [vinyl@teknorapex.com](mailto:vinyl@teknorapex.com).

**Thermoplastic Elastomer Division:** Americas: Tel. from U.S. only: 1-866-GET-TPEs (1-866-438-8737). Fax: 1-401-728-5680. E-mail: [tpe@teknorapex.com](mailto:tpe@teknorapex.com). Europe: Tel: 44-121-665-2100. Email: [eutpe@teknorapex.com](mailto:eutpe@teknorapex.com). Asia: [apactpe@teknorapex.com](mailto:apactpe@teknorapex.com).

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