A BROAD MEDICAL TECHNOLOGY AND PHARMA PORTFOLIO FOR ADVANCED DESIGN AND PERFORMANCE

As a trusted global leader in medical technology and pharmaceuticals, we offer a broad portfolio of enabling materials with unmatched technical expertise. Our advanced materials enable us to meet the most demanding health challenges by providing regulatory compliant materials with a wide range of mechanical properties and characteristics. Coupled with the ability to reduce total manufacturing costs by consolidating multiple parts into a single unit and the possibility to combine processing steps, Celanese can offer cost-saving opportunities with our pharmaceutical grades.

STRONG HISTORY OF MATERIAL INNOVATIONS, RESPONSIBILITY AND SUPPLY COMMITMENT

Our medical portfolio offers advances in healthcare polymers in a diverse array such as orthopedic implants, drug delivery systems, medical and drug delivery devices, and many more, bringing to market innovations for your healthcare products. We are a strategic and reliable development partner with 40 years of technical expertise in the medical industry, providing advanced, high-quality and biocompatible polymers backed by unmatched technical expertise.

CELANESE HEALTHCARE POLYMER PORTFOLIO

Medically Engineered Polymers

Celanese Healthcare polymers deliver:
- A portfolio of advanced and enabling materials, entirely virgin acid-free polymers and thermoplastic elastomers.
- Manufacturing and long-term supply guarantees.
- Celanese research and development capabilities.
- Processing guidance and support.
- Design and regulatory support.
- Color grading capabilities.
- Drug and Content Master File listing.
- Low gas permeability.
- NSF Class.
- FDA and EU compliant PC and EVA.
- Production according to GMP principles.
- Raw material delivered from automated warehousing.
- Long-term supply assurance by contract.
- Change management.

Celanex® MT® PBT

Applications:
- Drug delivery systems.
- Metal part replacement.
- Sealing.
- Thermoforming.
- Medical devices.
- Clamps.
- Functional parts with high dimensional precision and stability.
- housings.
- Dental instrumentation.
- Surgical instrumentation components.
- Thermoformed parts.

Vector® MT® LCP

Applications:
- Dental instruments.
- Metal parts.
- Pharmaceutical packaging.
- Ophthalmic devices.
- Medical devices.
- Scalpel/sterilization.
- Inert implant devices.
- Laser alignment technology.

Altena® G-EVA

Applications:
- Antimicrobial applications.
- Cryopreservation sterile storage.
- Dental.
- Pharmaceutical packaging.
- Medical I.V. (i.v.) catheters.
- Medical I.V. (i.v.) catheters.
- Medical I.V. (i.v.) catheters.
- Wound care.

GU®/SUNNIE®

Applications:
- Antibacterial films for total hip arthroplasty devices.
- Metal parts for total knee arthroplasty devices.
- Sterilization trays.
- Metal parts.
- Neoprene sheets.
- Food packaging.
- General use for spa.
As a trusted global leader in medical technology and pharmaceuticals, we offer a broad portfolio of materials with global reach, unmatched technical expertise. We provide advanced, high-quality and biocompatible polymers backed by a strong technical support program. We are a trusted and reliable development partner with nearly 40 years of technical expertise in the medical industry, providing advanced, highly functional and reliable polymers backed by unmatched technical expertise.

**Pharmaceutical Exemplary Materials**

**VitalDose® EVA**
- Blocks moisture and oxygen which ensures it is suitable in medical applications.
- USP class VI pharmaceutical grades as granules and powder.
- Pharmaceutical packaging
- Extrusion coating
- Blow fill seal (BFS) and extrusion coating.
- Resistant to impact, moisture and chemicals make it a great choice in medical packaging, such as medical tubing and drainage, packaging and food grades, each of which has low density polyethylene (LDPE) material that is USP Class VI and ISO 10993 certified with a high purity.
- Sunett® Acesulfame Potassium
  - Nutrinova® Potassium Sorbate
  - Nutrinova® Sorbic Acid and
  - Nutrinova® Sodium Saccharin

**Utida® EVA**
- This unique high-performance semi-crystalline copolymer provides a high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. The material is designed to deliver a high level of performance at temperatures up to 100°C.
- Medical tubing and drainage
- Complete air and moisture barriers
- Pharmaceuticals
- Intraocular implants
- Transdermal patches
- Dental applications
- Nonwovens used for filtration
- Anesthetic applications
- Cryogenic stem cell storage

**Medical EVA/LDPE Materials**
- Nutrinova® Potassium Sorbate
- Nutrinova® Sorbic Acid and
- Sunett® Acesulfame Potassium

**Pharmaceutical packaging**
- Nutrinova® Potassium Sorbate
- Nutrinova® Sorbic Acid and
- Sunett® Acesulfame Potassium

**Celanese Healthcare polymers deliver**
- A portfolio of advanced materials, ethylene vinyl acetate (EVA) copolymers and thermoplastic elastomers
- Manufacturing and long-term supply capabilities
- Celanese research and development capabilities
- Processing guidance and support
- Design and regulatory support
- Color regulatory approval
- Drug and Enantiotopic Melt Indexing
- ISO biocompatibility
- USP class VI
- ISO 10993 biocompatibility
- FDA and CE compliant
- FDA and CE compliant
- ISO 10993 biocompatibility
- Viscosity
- Environmental
- Patient compliance (PA and EI)
- Production according to GMP principles
- Free from additives derived from animal sources
- Long-term supply assurance by contract
- Change management

**Celanex® MT® PBT**
- Fortrex® MT® PPS
- Fortrex® MT® LCP
- Vectra® MT® LCP
- VitalDose® EVA
- VitalDose® PPS
- VitalDose® LCP
- VitalDose® EVA
- VitalDose® PPS
- VitalDose® LCP

**Fortrex® MT® PPS**
- Fortrex® MT® PPS is a high-temperature semi-crystalline polymer that provides high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. This material is designed to deliver a high level of performance at temperatures up to 100°C.

**Celanex® MT® PBT**
- This unique high-performance semi-crystalline polymer provides a high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. The material is designed to deliver a high level of performance at temperatures up to 100°C.

**Vectra® MT® LCP**
- Vectra® MT® LCP is a liquid crystal polymer. This unique high-performance material provides high-temperature performance in extreme thin-wall applications, while maintaining a high level of dimensional precision, stability and mechanical properties.

**Fortrex® MT® LCP**
- Fortrex® MT® LCP is a liquid crystal polymer. This unique high-performance material provides high-temperature performance in extreme thin-wall applications, while maintaining a high level of dimensional precision, stability and mechanical properties.

**Celanex® MT® PPS**
- Fortrex® MT® PPS is a high-temperature semi-crystalline polymer that provides high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. This material is designed to deliver a high level of performance at temperatures up to 100°C.

**Celanex® MT® PBT**
- This unique high-performance semi-crystalline polymer provides a high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. The material is designed to deliver a high level of performance at temperatures up to 100°C.

**Celanex® MT® PPS**
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**Celanex® MT® PBT**
- This unique high-performance semi-crystalline polymer provides a high thermal stability, very high chemical resistance, stiffness, strength and creep resistance. The material is designed to deliver a high level of performance at temperatures up to 100°C.
Celanese Healthcare polymers deliver:
- A portfolio of advanced medical grade polymers, materials, specialty vinyl acetate ethylene polymers and monomer solutions.
- Manufacturing and long-term supply quality assurance.
- Celanese research and development capabilities.
- Processing guidance and support.
- Design and regulatory support.
- Color compatibility.
- Drug and Drug Master File listing.
- Low outgassing properties.
- VGF Class.
- Woman-owned 
- Woman-managed.
- Global regulatory approvals.
- Long-term supply assurance by contract.
- Freedom from additives derived from animal sources.
- Production according to GMP principles.
- USP class VI.
- Food contact compliance (FDA and EU).
- USP class VI.
- Nonwovens used for filtration.

**Celenea healthcare polymers**

**Applications:**
- Drug delivery systems.
- Metal gear replacement.
- Small parts.
- Thin sections.
- Medical devices.
- Clamps and clamps.
- Functional parts with high dimensional precision and stability.
- Whistles.
- Dental instrumentation.
- Surgical instrumentation components.
- Tubing and tubing sizes.

**Fortron® MT® PPS**

Fortron® PPS is a high-temperature semicrystalline polymer that provides high thermal stability, very high chemical resistance, stiffness, and creep resistance. This material is gasless, BSE and TSE re-embed with a heat resistance up to 270°C.

**Applications:**
- Medical instrumentation.
- Metal replacement.
- Nonwovens used for filtration.

**Vectra® MT® LCP**

Vectra® is a liquid crystal polymer. This unique high performance polymer exhibits excellent thermal performance in extreme environment conditions while maintaining a high degree of precision and stability. The material is compatible with a broad range of medical sterilization techniques. These features are advantageous for use in next generation smart structuring technologies. These features are advantageous for use in next generation smart devices.

**Applications:**
- Medical instrumentation.
- Surgical instruments.
- Dental instrumentation.
- Medical packaging.
- Composites and composite components.
- Long-term sterilization.
- Laser structuring.

**GUR® UHMW-PE**

GUR® UHMW high molecular weight polyethylene (UHMW-PE) is a linear polymer with a much higher molecular weight than standard PE, which offers outstanding abrasion resistance, low impact resistance, easy molding and self-lubricating properties, and excellent mechanical characteristics.

**Applications:**
- Arthroplasty for total hip arthroplasty.
- Total knee arthroplasty.
- Shoulder replacement.
- Bearings components for shoulder and hip.
- Metal-on-metal bearings.
- Graft biopsies.
- General data for spine.

**Nutrinova® Sorbic Acid and Nutrinova® Potassium Sorbate**

Sorbates deliver globally recognized quality. We are the inventors and developers of sorbic acid, which provides excellent stability with neutral taste and color to protect high quality pharmaceutical products from mold, yeast or bacterial growth. Our Nutrinova® Sorbic Acid is available in food and pharmaceutical grades, each of which follow specific regulatory requirements.

**Applications:**
- Drug syringe.
- Pharmaceutical.
MEDICAL AND
PHARMACEUTICAL
POLYMERS FOR INNOVATIVE
HEALTHCARE PRODUCTS

Healthcare Materials
Product Portfolio

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