



Rigid and Flexible Polymer Compounds

High-Heat, Low-Smoke Compounds for Demanding Applications

Aurora Material Solutions is a dynamic and innovative company that produces the highest quality plastic compounds in both powder and pellet form. Our compounds perform consistently and reliably in a variety of applications. AuroraGuard™ compounds include rigid PVC, TPOs and TPEs that provide high-heat, low-smoke zero-halogen and flame-retardant properties. Our experts will work with you to create the right formulation, considering all factors that meet your specific application needs.

Low-Smoke Zero-Halogen

Low-smoke zero-halogen (LSZH or LSOH) is a type of plastic used in the wire and cable industry for cable jacketing or insulation. LSOH cable jacketing is custom compounded to produce minimal smoke and low toxicity when exposed to fire.

Most network cables (CAT5, CAT6, etc.) are insulated with polyvinyl chloride (PVC), polyethylene, or thermoplastic urethane (TPU). In a fire, halogen-containing plastics release hydrogen chloride, a poisonous gas that forms hydrochloric acid when it comes in contact with H₂O. Low-smoke zero-halogen cables do not produce this toxic combination of gas, acid, and smoke when exposed to flame.

Since no harmful toxins are actually released, LSOH material is used in poorly ventilated areas such as plenum, aircraft, rail cars, and tunnels in which smoke is likely to both build up and come into contact with people. Low-smoke zero-halogen material is required when the safety of people and equipment is critical. Low-smoke zero-halogen compound also has the added benefit of complying with the European Union's Restriction of Hazardous Substances (RoHS) directive and similar North American safety and environmental standards.

Our Innovative Line of Low-Smoke Zero-Halogen Compounds Falls into Two Families:

EXTRUSION GRADES – By using special grades of metal hydroxide and very unique resin combinations, we develop a series of one of the most flexible zero halogen compounds on the market, having a -50°C to 90°C+ continuous use temperature rating, as well as exceptional physical and processing characteristics.

MOLDING GRADES – Using advanced phosphorus-nitrogen chemistry, Aurora Material Solutions developed a high grade FR intumescent compound with UL 94 VO rating down to 40-45 mils. Other special characteristics of these compounds are good thermostability and low moisture sensitivity.

Concentrates

Aurora Material Solutions offers a portfolio of concentrates that includes more than 20 formulations. The goal of concentrates is the ideal dispersion of additives in the polymer matrix. The fine, powdery feed material often tends to agglomerate and therefore is difficult to work with. Concentrates (masterbatches) with an additive share of 20 – 70% are available, depending on the feed material and level of dispersion needed. Using masterbatch increases the process stability. Additionally, since there is no handling of large powder masses, the environment and the work station remain clean. Our portfolio of concentrates are divided into five main categories. When more than one additive is required, Aurora Material Solutions can combine two or several of these additives to provide multifunctional performance into a single custom concentrate, or the customer can combine them individually themselves when applicable.

- › FLAME RETARDANT (FR)
- › ULTRAVIOLET (UV)
- › EXPANDABLE
- › ODOR MASKING
- › DESICCANT



Applications for AuroraGuard™ compounds include:

- › APPLIANCE
- › AUTOMOTIVE
- › BATTERY
- › CUSTOM
- › ELECTRICAL
- › FILM & SHEET
- › HOSE & TUBE
- › PACKAGING
- › RECREATION
- › UMBILICALS
- › WIRE & CABLE

Expect Exceptional Service and Speed

Repeat business is how we've built our company. Our customers appreciate fast quotations, an ability to handle any order size, and an unsurpassed lead time. Beyond service and speed, is exceptional quality. Our manufacturing facilities are certified to ISO 9001:2015 with Design manufacturing dedicated solely to custom compounding, as well as achieving industry-leading tolerances on manufacturing processes.

Aurora Material Solutions isn't the only supplier of polymer compounds, but we separate ourselves from the competition as a custom compounder, driven by a continuous improvement mindset. Our goal is to provide the highest quality products and the best customer service in the industry. We work closely with you throughout the process to meet your specific needs, from determining the formulation for the job, to assistance with colors and compound matching. Aurora Material Solutions strives to be our customers' **"first choice"** in plastics compounding.

AURORA GUARD™

Our plants' quality management systems are certified to ISO 9001:2015.