



Charmor™

Protecting people & property

Our Charmor™ range for intumescent systems in plastics

- Rich carbon source for phosphorous/nitrogen based systems
- Slow burn action, and halogen-free fire protection
- Significant reduction in smoke and heat release rate
- Largest global production capacity

Intumescent systems win valuable time

Growing demands on protecting people & property

Intumescent systems for plastics offer halogen-free fire protection for people and property. They are ideal for fire resistant plastics in electrical, electronics and transportation.

Intumescent systems work by forming a thick, stable carbon foam barrier when exposed to fire, and have these key components:

- Charmor™, the carbon source and critical component
- An acid donor and a spumific/blowing agent based on phosphorous/nitrogen derivatives

In plastic materials intumescent systems slow combustion, cut heat and smoke release rates and reduce melt dripping. All helping to win more time to save lives and reduce fire damage.

Charmor™ enhances intumescent systems

Charmor™ polyols are a rich carbon source for producing superior intumescent systems. The exceptional product quality is assured by ISO 9001 procedures, and our precise milling technology for polyol micronization. Our quality control procedures ensure that we achieve the minimum requirement for 98% of our milled particles to be below the stated particle size values, 40 µm and 15 µm. Having total control over the quality chain and processes means we can guarantee high polyol purity, stable particle size and narrow distribution curve all essential to achieving high and consistent performance every time. The absence of coarse particles also means fast incorporation rates into end products.



Intumescent systems in plastics

Managing a burning issue safely & sustainably

Intumescent systems for plastics must meet new fire regulations in the electrical, electronics and transportation sectors, which demand lower smoke release, non-dripping plastics, and non-toxic fumes. The growth in intumescent systems has also been driven by raw materials and recycling regulations. Intumescent systems meet both of these demands and, with Charmor™, offer superior performance and fire protection. Intumescent systems also enable more lightweight plastic than mineral-based flame-retardants for significant weight savings in applications such as transportation.

- Charmor™ PM is suitable for cost-efficient thermosets, such as unsaturated polyesters for gel coats and structural resins.
- Charmor™ PM40 Care is the same molecule as Charmor™ PM40, but with a sharpened sustainability profile. This is a new carbon source product based on renewable raw material and energy, with a low carbon footprint.

- Charmor™ DP is the most thermally stable and least water sensitive grade, making it suitable for a wide range of thermoplastic processing for highest performance and durable end products, such as cables.
- Charmor™ PP100, offers a low melting point and the best polymer compatibility, which improves flow during thermoplastic processing and gives more robust, reproducible, reliable mechanical properties. It is used in polyolefins and thermoplastic elastomers (TPE's).

The addition of the new Charmor™ PM40 Care strengthens Perstorp's position as the market leader in carbon sources for intumescent coatings and plastic materials. It also supports our passion to innovate products that contribute to saving people's lives and a more sustainable society.

Application guidelines

	Thermosets, UPR composites and Gel coats	Polyolefins, TPE, TPU, rubber	Polyamide
Charmor™ PM15/40	√		
Charmor™ PP100		√	√
Charmor™ DP15/40	√	√	√

Product data summary

Properties	Charmor™ PM	Charmor™ DP	Charmor™ PP100
Melting point	260°C	222°C	170°C
Water solubility (% at room temperature)	5.25	0.22	0.2
Typical hydroxyl number mg KOH/g	1,645	1,325	1,050
Density kg/m³	1,400	1,370	1,320
Particle size	<40 µm typ 99,9 % or <15 µm typ 98,5 %	<40 µm typ 99,9 % or <15 µm typ 98,5 %	<250 µm



Your Winning Formula

The Perstorp Group, a trusted world leader in specialty chemicals, places focused innovation at your fingertips. Our culture of performance builds on 130 years of experience and represents a complete chain of solutions in organic chemistry, process technology and application development.

Matched to your business needs, our versatile intermediates enhance the quality, performance and profitability of your products and processes. This is how we enable you to meet market demands for safer, lighter, more durable and environmentally sound end-products – for the aerospace, marine, coatings, chemicals, plastics, engineering, and construction industries, as well as automotive, agricultural, food, packaging, textile, paper and electronics applications.

Our chemistry is backed by reliable business practices and a global commitment to responsiveness and flexibility. Consistent high quality, capacity and delivery security are ensured through strategic production plants in Asia, Europe and North America, as well as sales offices in all major markets. Likewise, we combine product and application assistance with the very best in technical support.

As we look to the future, we strive for the development of smarter and safer products and sustainable processes that reduce environmental impact and create real value in new chemical applications. This principle of proactive innovation and responsibility applies not only to our own business, but also to our work with yours. In fulfilling it, we partner with you to create a winning formula that benefits your business – as well as the people it serves.

Discover your winning formula at www.perstorp.com