



Member of ORLEN Unipetrol Group

MAKROPLUS[®] CC

ORLEN Unipetrol group is the largest refinery and petrochemical company in the Czech Republic. ORLEN Unipetrol manufactures and distributes fuels, plastics, oils, lubricants and fertilizers, and many other products.

ORLEN Unipetrol is a part of PKN Orlen, one of the largest European refining and petrochemical groups.



HIGHLY ELECTROCONDUCTIVE CONCENTRATES AND COMPOUNDS FOR PLASTICS

MAKROPLUS® CC products are granulated electroconductive carbon black Chezacarb concentrates and compounds found in various thermoplastics. They are well suited to applications which require permanent antistatic or electroconductive properties.

MAKROPLUS® CC products are designed to be either diluted with appropriate plastics or directly processed using the most common plastics processing technologies.



MAKROPLUS[®]CC APPLICATIONS

TYPICAL APPLICATIONS

- ▶ electroconductive or antistatic plastics to produce blown film
- ▶ pipes for chemical and mining applications
- ▶ fuel tanks, fuel piping
- ▶ containers, jerry cans
- ▶ antistatic transport boxes, ESD foams, transport pallets
- ▶ flooring
- ▶ geomembranes and many others

SPECIAL APPLICATIONS

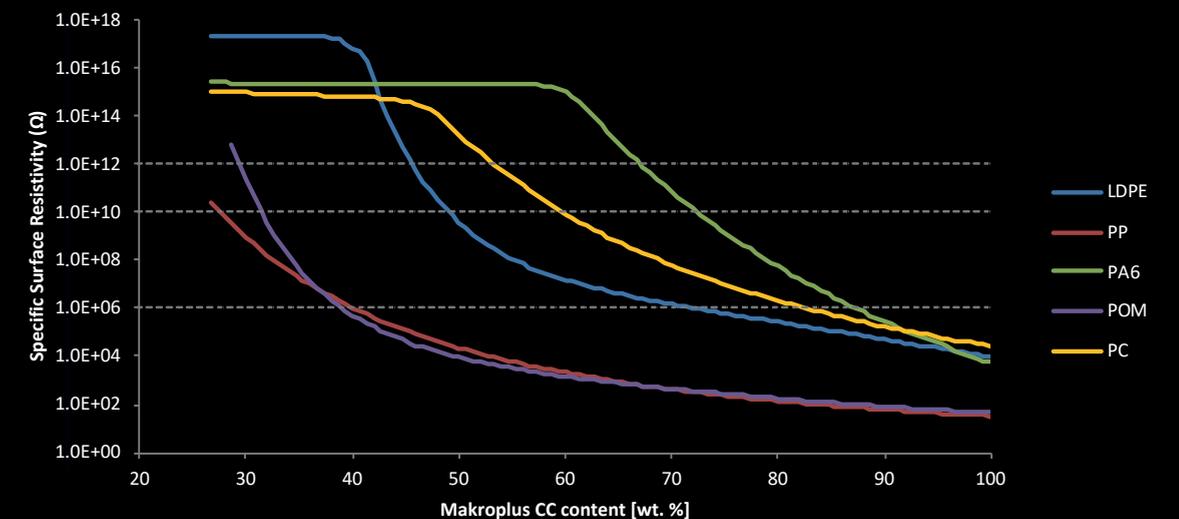
- ▶ 3D printing
- ▶ fibres

MAKROPLUS[®]CC

PROCESSING: Electroconductive MAKROPLUS[®] CC can be processed on standard processing equipment with common plastic technologies such as injection moulding, extrusion, film blow moulding, extrusion blow-moulding and foaming using chemical or physical foaming technologies. The typical recommended dose is around 40–60 wt.%, depending on the desired final product resistivity. For more information, please refer to the technical data sheet for each specific product.

PORTFOLIO: Concentrates are available in all common polymer matrices, including PP, HDPE, LLDPE, LDPE, EVA, ABS, PS and PA 6. Tailor-made concentrates in other thermoplastics or materials with specific properties (e.g., PLA, PC, POM or TPE) can be produced upon customer request.

Specific Surface Resistivity vs. Makroplus CC Content in Various Polymers
measured on extruded sheets (thickness 1 mm)



MAKROPLUS® CC PACKAGING, STORAGE, SAFETY

PACKAGING: MAKROPLUS® CC concentrates are supplied in pellet form (size 2–4 mm) and packed in 25 kg PE bags. Concentrates can also be supplied in large bags upon customer request.

STORAGE: Under standard conditions for plastics, protected from moisture, heat and direct sunlight.

SAFETY: MAKROPLUS® CC concentrates do not contain any dangerous substances, however general chemical handling rules should be observed.



MAKROPLUS® CC Electroconductive Solutions for Plastics

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For more information about MAKROPLUS® CC, please visit ORLEN Unipetrol RPA s.r.o. – Polymer Institute Brno, o.z. web pages:

www.orlenpolymer.cz

www.chezacarbcarbonblack.com

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