

BRINGING LIFE  TO PLASTICS

PPA polymer processing aid

IMPROVING
HOMOGENISATION
OF PIGMENTS

IMPROVING
EXTRUSION
QUALITY



GABRIEL-CHEMIE
GROUP

LOW SURFACE
ENERGY INTERFACE



POLYMER PROCESSING ADDITIVES

PPAs are fluorinated polymers for improving the extrusion quality, homogenisation of pigments and fillers and output of thermoplastic polymers. Typical processes are blown and cast film, pipe, sheet, cable, extrusion blow molding, monofilament, tapes and fibers.

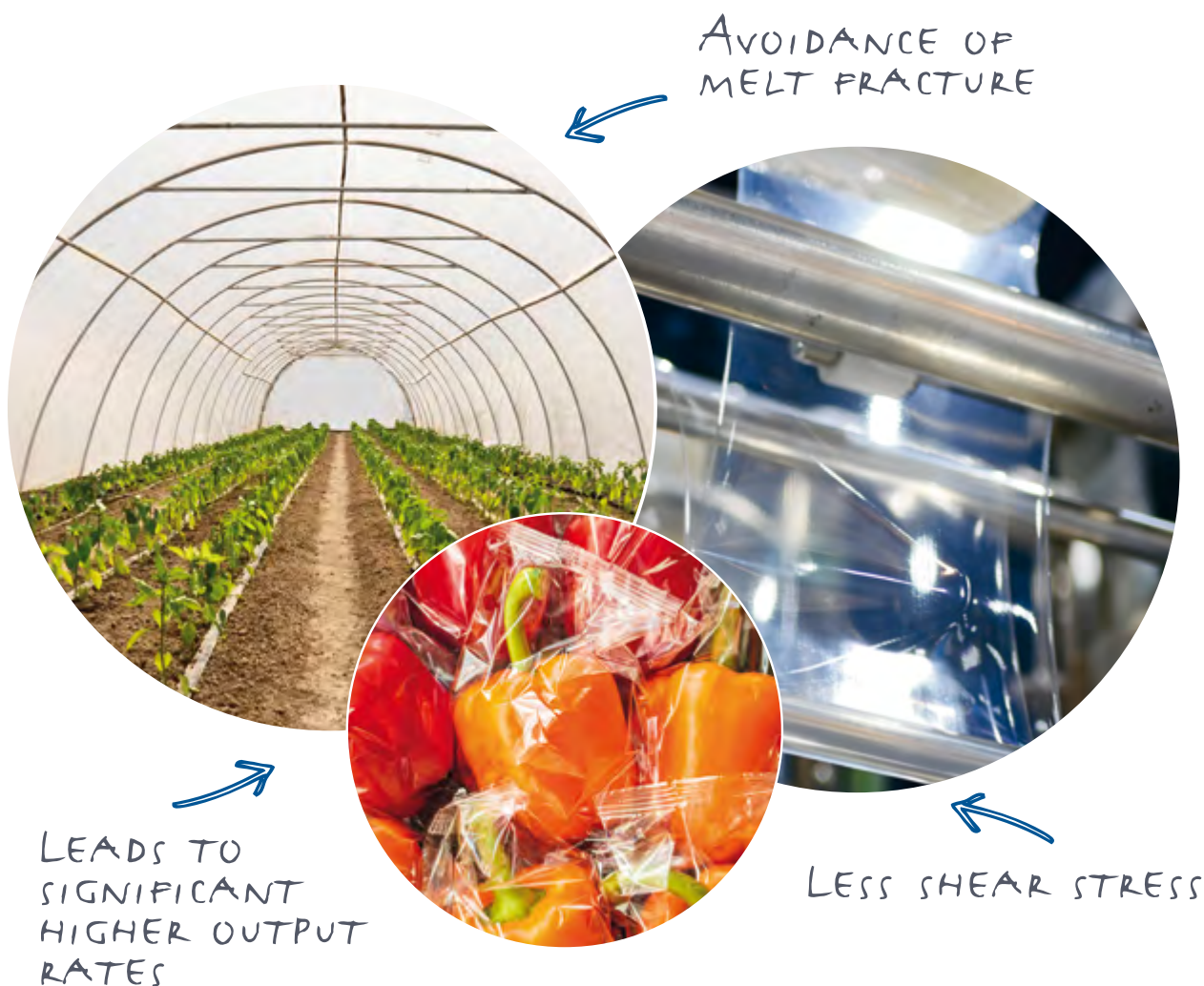
Disturbances in the melt flow during extrusion can cause surface defects on the article. Mechanism of PPA is to build up a fluoropolymer coating on the surface of barrel, screw and die of the extruder. This gives a low surface energy interface between the metal parts and the molten polymer, allowing the melt to slip more easily over the metal parts.

Stress reduction and avoidance of melt fracture, reduced pressure, process temperature and machine torque are further benefits of PPA, leading to significant higher output rates.

FLUOROPOLYMER COATING







PRODUCT PORTFOLIO AND APPLICATIONS

MAXITHEN HP7AA8400PPA

For LDPE, low MFI grades of LLDPE, mPE, and HDPE. Thermal stability up to 240°C, for all types of films, for recipes containing inorganic fillers, antiblocks, white pigments, HALS-UV-Stabilisers.

Carrier polymer LLDPE

MAXITHEN HP7AA3950PPA

For LDPE, low MFI grades of LLDPE, mPE, and HDPE. Thermal stability up to 240°C, for laminated films, for recipes containing inorganic fillers, antiblocks, white pigments, HALS-UV-Stabilisers.

Carrier polymer LLDPE

MAXITHEN HP7A8770PPA

For LDPE, LLDPE, mPE, especially for solution-processed PE-types of higher MFIs (> 1), thermal stability $>260^{\circ}\text{C}$, good dispersability, for natural films free of fillers, antiblocks, white pigments.

Carrier polymer LLDPE

MAXITHEN HP71030/11PPA

For LLDPE, HDPE, PP. Thermal stability up to 280°C, for raffia, tapes, for recipes containing fillers, antiblocks, white pigments, HALS-UV-stabilisers.

Carrier polymer LLDPE

MAXITHEN PS794290PPA

For Polystyrenics. Thermal stability $>260^{\circ}\text{C}$. For improved vacuumforming sheets.

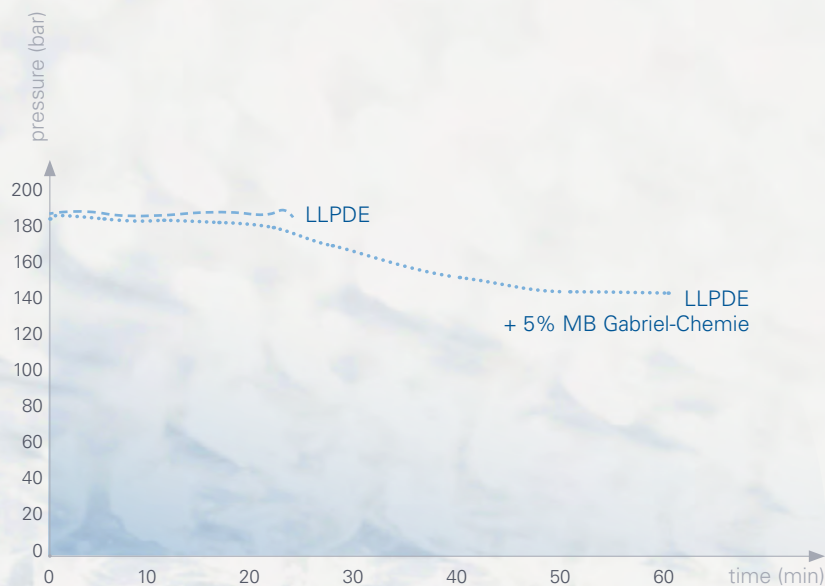
Carrier polymer PS

MAXITHEN PA794390PPA

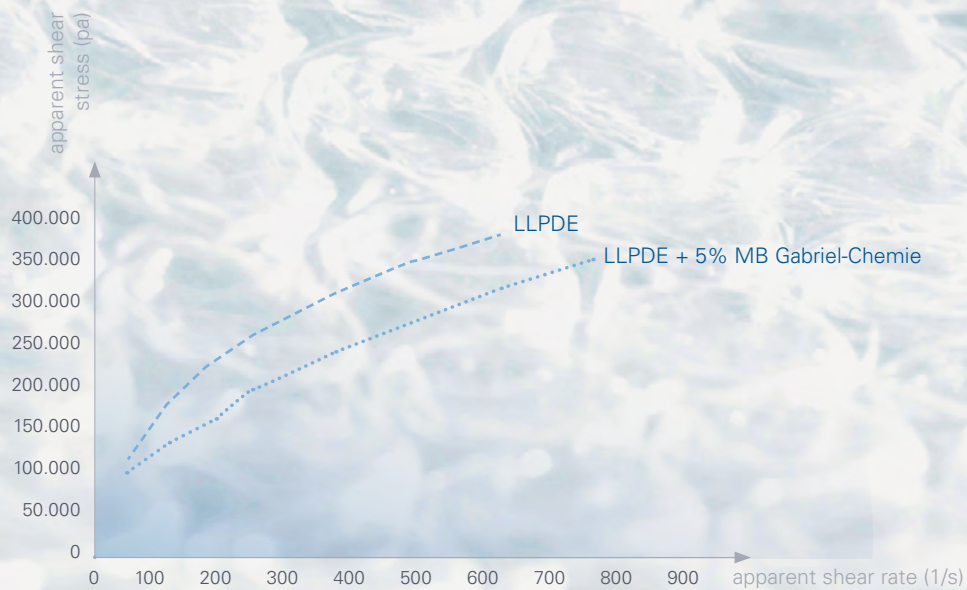
For Polyamides. Thermal stability $>280^{\circ}\text{C}$.

Carrier polymer PA6

COATING CURVE



SHEAR STRESS



Screw speed for capillary rheometry: variable from 5 to 60 rpm, corresponding with a shear rate range from 50–800 sec⁻¹.

BUSINESS UNITS OF GABRIEL-CHEMIE GROUP:



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