Chain extenders increase the molecular weight of poly-condensates by re-coupling their degraded chains while their processing, re-processing or recycling is taken place.

**PE CE7777** is a LDPE based chain extender masterbatch. The active agent in the masterbatch is a multi-functional reactive polymer designed to reverse the degradation of PLA, PET, PC, PA and other condensation polymers. It is a polymeric coupling agent that reacts with degraded polymers to restore the original molecular weight as well as the I.V. (Intrinsic Viscosity) and the melt viscosity. This means that low quality recycled material can be upgraded or that good quality recycled material can be treated more robustly.

**PE CE7777** can be used during processing to increase the melt strength of PET, PA and PC. This is useful in extrusion, thermoforming and injection moulding applications.

**EXTRUDER PRESSURE EFFECTS:**

The use of **PE CE7777** in reactive extrusion or reactive injection moulding operations produces significant increases in molecular weight of the plastic being modified. This increase in molecular weight raises the melt viscosity, which in turn raises the pressure observed in the equipment. It is important that operators be aware of these expected pressure changes. Alarms, automatic shut-offs, screen purging set-points and other operation variables should be adjusted to accommodate these normal and expected pressure increases.

**PE CE7777** reacts quickly. Its reaction will be over 99% complete if at least 30 sec. residence time is provided at 200˚C in a well mixed system. Alternatively, 10 sec. residence time at 300˚C will provide 99% completion. These limits accommodate most extrusion and injection moulding processes for the recommended thermoplastics and applications. The active agent in **PE CE7777** is thermally stable up to 320˚C. Therefore, melt temperature should not exceed 320˚C.

**RECOMMENDED DOSAGE:**

The addition rate of **PE CE7777** depends on the performance requirements of the final product. Recommended addition rates are between 0,5 and 6 % by weight of the masterbatch, depending on the process, the processing conditions and the polymer grade. Care should always be exercised when adding highly functional extenders into extrusion or injection moulding processes to prevent extensive branching and cross linking. Therefore, we recommend to start processing trials with a low **PE CE7777** dosing level.
Appearance: white pellets

Food Contact:
PE CE7777 is composed of ingredients which are cleared for use in articles for food contact. Maximum allowed levels of PE CE7777 in % w/w can vary per application/country. Some examples are:

**EEC;** - In PET up to 4% PE CE7777.

**USA;** - Repeat Use Polymer Applications
PE CE7777 may be used as a polymeric chain extender in repeated use polymer applications at a maximum of 2% in contact with all food types and under all conditions of use.

PE CE7777 is supplied in regular pellet form, packed in 25 kg-bags and is suitable for direct addition by means of automatic dosing units or by means of pre-blending.

Note: The details of this brochure are based on our current state of knowledge. A binding warranty of special qualities or suitability for a concrete purpose can not be derived from our details. The customer is obliged to assure the suitability of the product. These details do not remove the customer’s responsibility for determining product suitability or liabilities.