

## Sterilization

Properly and flawlessly manufactured parts made of Ultraform® can be sterilized in hot steam at 121°C and, with some limitations, even at 134°C, over the course of many cycles, whereby the high-molecular grades perform best. Plasma sterilization is also a good option.

Repeated sterilization in ethylene oxide can be carried out at room temperature without problems employing familiar methods, but this hardly plays a role any more because of the absorption and subsequent release of toxic ethylene oxide.

Great caution is advisable in case of sterilization using ionizing radiation. Chemical disinfection is not recommended.

## Behavior on exposure to high-energy radiation

Polyacetals are only moderately resistant to electron and gamma rays. Ultraform® behaves fundamentally in the same way with respect to these two types of radiation. Depending on the total radiation dose, a more or less pronounced degradation occurs, along with brittleness. A total dose of 25kGy (2.5Mrad) can already affect the mechanical properties and the color of the parts.

## Fire behavior

Polyoxymethylenes ignite on exposure to flame and continue to burn after the ignition source has been removed. A flame-retardant treatment is not offered.

Ultraform® has a UL 94 flammability rating of “HB”.

The combustion rate required by FMVSS 302 of <100mm/min is met by Ultraform® test specimens having a thickness of 1.0mm and over.

## Electrical properties

Ultraform® has good electrical insulation properties and high dielectric strength. The very low moisture absorption of the material does not impair this property, making parts made from Ultraform® highly suitable for use in consumer electronics and telecommunications.

In the field of electric power engineering, Ultraform® is widely used for functional and drive parts which are not used directly as supports for current-carrying parts.

Electrically conductive special grades such as, for example, Ultraform® N2520 L, are available for applications that call for low electric surface resistance.

## Product line

The Ultraform® product line encompasses grades for processing by means of extrusion and injection molding. The following product groups exist:

### Grades with a high melt strength and high molecular weight

for the extrusion of thin-walled as well as thick-walled tubes and panels, hollow profiles and semi-finished products having wall thicknesses of up to 50mm and more. These are made into gear wheels, bearings and other machine elements by means of non-cutting procedures.

H2320 004 for thin-walled semi-finished parts  
H4320 for thick-walled semi-finished parts

The grades are likewise suitable for blow molding (E3320) and for the injection molding of thick-walled molded parts with few voids.