

PLASTIC EXTRUSION

Gestión de Compras has extensive experience in the design, development and manufacture plastic parts and profiles by extrusion.

PROCESS:

In extrusion process, molten material passes through a die that forms a continuous straight profile which is cooled and solidified. Usually, this process is cost-effective for simple profiles and for high volume of production.

The principal advantage of this process is that is possible create long length parts. Another one is that is possible manufacture pipes with integrated coupler including rubber seal.

On the downside say that the plastic does not dissipate heat as well as metals so water baths or cooling rolls are required to achieve a correct cooling rate.

The more common polymers extrusion processes are:

- **Blown film extrusion:** This process combines extrusion and blowing to produce a tube of thin film. It begins with extrusion of tube that is drawn upward with rollers and simultaneously expanded by air inflated into through a die mandrel. Plastic film for shopping bags and continuous sheeting are manufacturing by this process.
- **Sheet and film extrusion:** It is used to extrude plastic sheets or films that are too thick to be blown. The molten material is extruded through a flat die. Then, it is pulled through a set of cooling rolls which are used to determine the thickness of sheet/film and its surface texture.
- **Tubing extrusion:** The molten plastic is extruded through a die and hollow cross sections are formed by placing a mandrel inside the die.
- **Over jacketing extrusion:** It is also called wire coating process. This process allows for the application of an outer layer of plastic onto an existing wire or cable which is pulled through the center of a die.

- **Co-extrusion:** It is the extrusion process of making multiple layers of material simultaneously. It is used to apply one or more layers on top of base material to obtain specific properties.
- **Extrusion coating:** It is used to make an additional layer onto an existing rollstock of paper, foil or film.

PRODUCTION:

Gestión de Compras has extensive experience in the design, development and manufacture plastic parts and profiles by extrusion. We work with a wide range of materials and processes. Thus we offer to our customers their desired parts with high quality and with the most competitive prices.



MATERIALS AND PRODUCTS:

There are a lot of plastic available for extrusion:

- PVC
- ABS
- Polyethylene (PE)
- Polypropylene (PP)
- Polystyrene (PS)
- High impact polystyrene (HIPS)
- Polymethyl methacrylate (PMMA)
- Nylon

There is a huge range of plastic parts made by extrusion as pipes, fences, windows frames and profiles, adhesive tapes, wire insulation, automotive interiors, shopping bags, wrapping materials, sheets... and it is widely used in packing, construction, decoration, automotive, technical textiles...



TOLERANCES:

Tolerances for plastic extrusions differ widely from those of metal extrusions. It is because metals harden quickly, they typically hold tighter tolerances than extrusions made of plastic materials. Obtain tight tolerances on extruded plastic parts is much difficult that are usually, based upon the raw materials used, the complexity of the part, and the tooling that is made to produce the part. Some materials, such as PVC, cool more efficiently obtaining thus better tolerances than other which hold onto heat, such as polypropylene.

STANDARD AND CERTIFICATES:

Gestión de Compras only works with companies that can provide us warranties, which are holders of all necessary quality certificates and work according to specific industry standards such as:

- ISO 9001 and ISO 14001.
- TS 16949
- ISO 8062, ISO 286-2, DIN 2768, etc.

Standards according to extruded materials:

- ISO 19069 to polypropylene (PP)
- ISO 16396 to polyamide (PA)
- ISO 1622 to polystyrene (PS)
- ISO 2580 to ABS
- ISO 4894 to SAN
- ISO 7391 to polycarbonate (PC)
- ISO 17855 to polyethylene (PE)
- ISO 8257 to methyl methacrylate (PMMA)
- ISO 15013 to extruded sheets of polypropylene (PP)



CONTACT:

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