4.0 METAL INSERTS

The following metals are used in the production of our inserts and some products:

- Automatic steel, high speed, leaded CF9SMnPb36 according to UNI 4838/80;
- Cold formed steel C10 according to UNI 3740;
- Automatic brass, high speed OT58 according to UNI 5705/65;
- Die cast zinc, aluminium, copper alloy (Zamak ZnAl4Cu1 – alloy Zl0410) according to UNI EN 1774;
- Drawn anodised aluminium, alloy 6060 according to UNI 573/2;
- Stainless steel X10CrMnS1809 according to UNI 7890, AISI 303;
- Stainless steel X10CrMnS1810 according to UNI 7890, AISI 304.

4.1 Surface finish of metal inserts

The type of treatment used for the metal inserts is specified on every page of the catalogue.
A list of the treatments have been summarised below. Contact our sales office direct to request a copy of the data sheets.

Standard finishes

Shiny blue galvanising: standard treatment for all the inserts with threaded stud and for inserts with through-holes in the A-C-D-E-N families.

Black oxide treatment (black oxidation): standard treatment for a part of the M family of handgrips. On request this treatment can also be applied to the other types of inserts.

Epoxy powder paint: standard treatment used for colouring the A family zamak lever bodies.

Alternative finishes

On request and for reasonable quantities, other types of surface finishes can be applied; these include:

Dacromet: a special type of treatment which involves the application of a coating which is highly resistant to weather extremes. Low-cost alternative to stainless steel. On request this treatment can also be applied to other insert types.

Shiny yellow galvanising (yellow passivation): is similar to blue galvanising and can be applied to all metal inserts.

Black galvanising: is a special application of a layer of coating which is composed of metal oxides. Abrasion-sensitive, easily-scratched surface.

Nickel plating: is a type of chemical plating of a layer of nickel. It is used because of its great resistance to weather extremes. It can be applied to all steel and brass inserts. It is non-compatible with food applications due to the presence of nickel.

5.0 TEMPERATURE RESISTANCE

The most important factors concerning the resistance to temperature of plastics are: the duration of exposure to the heat source and the presence of applied forces. In fact, softening is the greatest risk in the presence of heat. In this phase, if a force (locking) is applied it is easier to break the bond between the plastic and the moulded-in metal inserts. Notwithstanding the fact that the inserts are designed for strong adhesion to the plastic material, if certain temperatures are exceeded the use of the part is affected.

Material	Continuous use (+ 8 hours)	Continuous use (+ 8 hours) under force HDT/A	Brief use (60/120 sec.)	Continuous use (+ 8 hours) Minimum temperature
Thermohardened	200°C	-	200°C	-40°C
Reinforced polyamide PA6+GF	110°C	100°C	160°C	-10°C
Polyamide PA6	80°C	80°C	120°C	-10°C
Polycarbonate PC	120°C	120°C	140°C	-40°C
ABS	85°C	100°C	100°C	-40°C
Polystyrene PS	75°C	75°C	90°C	-10°C
Polyethylene PEHD PELD	75°C	40°C	85°C	-50°C
Reinforced copolymer polypropylene PP	-	90°C	-	-50°C
Vulcanised rubber NBR	100°C	-	130°C	-30°C