



The expert in metallic pigments and powders

**Metallic pigments
for masterbatch-
compounding-injection
moulding processes**

Metallic pigments

Metallic pigments are used in the coloration of plastic materials for their optical effects, they also increase the value and look of the polymer.

The use of metallic pigments in masterbatch-compounding-injection moulding processes provides a durable protection of the metallic pigment after application, because the metallic pigments remain in the polymer matrix.

Aluminium and to a lesser extent bronze, copper metallic pigments are suitable for all processes referred to above and specifically for :

- master batch of ABS, PVC, HDPE, LDPE and polyolefine products
- injection moulding
- blow moulding

Gold bronze and copper pigments for masterbatch-compounding-injection moulding processes

Available in Rich Gold, Rich Pale Gold, Pale Gold and Copper shades

Powders	Pastes	Particle size			Optical Characteristics	
		D10	D50	D90	Brilliance	Coverage
2500	2500/ME/80-20	16	42	78	★★★★★	★★★
3000	3000/ME/80-20	15	40	79	★★★★★★	★★★
36	36/ME/80-20	10	28	58	★★★★★	★★★
3900	3900/ME/80-20	12	31	54	★★★★★★	★★★
4000	4000/ME/80-20	4	19	43	★★★★★	★★★
5000	5000/ME/80-20	5	15	37	★★★★★	★★★★
6000	6000/ME/80-20	3	12	25	★★★★	★★★★
9000	9000/ME/80-20	3	9	20	★★★★	★★★★★
13000	13000/ME/85-15	2	7	16	★★★	★★★★★
FT	FT/ME/85-15	1	3	7	★★	★★★★★★

* paraffine oil

Aluminium pigments for masterbatch-compounding-injection moulding processes

Powders	Pastes	Particle size			Optical Characteristics	
		D10	D50	D90	Brilliance	Coverage
O2	O2/ME/80-20	28	86	180	★★★★★	★★★
O4	O4/ME/80-20	23	76	165	★★★★★	★★★
O6	O6/ME/80-20	16	58	135	★★★★★	★★★
O8	O8/ME/80-20	13	45	110	★★★★★	★★★★
880	880/ME/80-20	9	32	78	★★★★★	★★★★
8880	8880/ME/80-20	6	21	55	★★★★	★★★★
8980	8980/ME/80-20	4	14	42	★★★★	★★★★★
O24	O24/ME/80-20	3	10	30	★★★★	★★★★★
76000	76000/ME/80-20	2	9	24	★★★★	★★★★★
O30	O30/ME/80-20	2	8	20	★★★★	★★★★★
O32	O32/ME/80-20	2	7	20	★★★★	★★★★★
80000/A	80000A/ME/80-20	2	7	20	★★★★	★★★★★

User recommendations

The following recommendations need to be kept in mind :

The standard AVL-grades will best retain their metallic shine when the shortest possible extrusion and heat exposure are used in the process. Mechanical shear will break the particles and reduce the metallic effect and brilliance as a result.

Introducing the pigment at the latest possible stage of the process is in all cases a very important directive to keep the properties of the metallic pigment.

When using the pigment in powder form, it is convenient to mix the metallic pigments directly in the drum containing the polymer prior to introducing the mix in the injection moulding machine.

This method will help retain the original optical effects of the metallic pigment and save the cost of first having to make a masterbatch (pigment concentrate) . Masterbatch concentrates generally contain about 30% pigment and are obtained by extrusion.

Aluminium pigments will withstand temperatures up to 300°C and over , but temperatures of 240°C and below are best kept to retain all metallic and optical properties. Since there is a tendency for gold bronze pigments to change color at a temperature above 90-100°C for an exposure of about 20-30 minutes, we recommend to reduce the time exposure in function of the increase of temperature, until the optimal effect/combination is obtained.

Coarse grades as well as fine grades can be used. Fine grades. (aluminium 8980,024,76000,030,032,80000A and bronze/copper 6000,9000,13000) are generally preferred to ensure a uniform metallic color in the monomer.