

## COVERING, DEOXIDISING FLUXES FOR COPPER AND Cu ALLOYS

Copper alloys during the melting process are subject to oxidation due to the reaction with atmospheric oxygen. Besides the formation of oxides, this phenomenon can cause a change in the composition of the alloy, such as in the case of brasses because of zinc oxidation.

At the end of melting the melt contains oxides and solid impurities from different origin: pollutants contained in the solid charge, refractory particles from the furnace lining, dross residues, etc. The impurities must be removed from the melt before casting, in order to avoid the presence of inclusion in the castings and in wrought products, which produce a worsening of mechanical and superficial characteristics and problems during successive workings.

PROTECME supplies a wide range of products for the different operating conditions, which are used for the elimination solid impurities.

The products accomplish different actions that we can list as follows:

- Covering: they form a protective layer on the surface of the melt, thus reducing the alloy oxidation and, consequently, the melting losses. This is particularly important in case of turnings and fine chips melting.
- Deoxidisation: the chemical and physical characteristics of the materials favour the separation of the solid impurities from the molten bath and their passage into the dross.

The following table lists the most common products.

PRODUCT	APPEARANCE	SLAG	USE	ALLOYS	FURNACE	APPLICATIONS
<i>ITALBRASS</i>	Whitish powder	Viscous	-	Brasses	Induction	Covering 1-2%
<i>ITALBRASS 49</i>	White powder	Viscous	-	Copper brasses	Crucible, induction	Covering 1%
<i>ITALBRONZO</i>	Black powder	Viscous	-	Tin bronzes and gunmetals	Crucible, reverberatory	Covering 1%
<i>ITALBRASS M4</i>	White powder	Liquid	-	Al, Mn, Si bronzes	Crucible, induction	Covering 0,25-0,75% Fluxing 0,25-0,50%
<i>ELIMINATOR CC2</i>	Dark brown powder	Dry	Plunger	All except Al bronzes	All	Washing-elimination of Al traces 0,2-1 %
<i>ITALBRASS SAG/8</i>	Black powder	Liquid	Manual or autom. distrib.	Brasses	-	Protection of metal channel and tundish of continuous casting

Other products are available for specific situation.

PROTECME supplies new products able to satisfy the individual needs of each foundry.