TECHNICAL DATA SHEET

Sn60-Pb40 (BROFIL 60) flux-cored solder

BROFIL 60 - Sn60Pb40. Tin-Lead solder according to EN-ISO 9453, alloy 103.

TECHNICAL DATA – BROFIL 60	
Melting point (ºC)	183-191
Density at 20ºC (gcm^{-3})	9.8
Tensile strength (MPa)	34
Elongation (%)	19
Hardness (HB)	12

*All the characterizations and procedures done to obtain the physical properties of the solder were carried out in collaboration with the University of Barcelona.

FLUX TYPES	
BROFIL 60 B 1.1	(Flux without rosin with halogens) REM1
BROFIL 60 B 1.2	(Flux without rosin without halogens) REM0
BROFIL 60 B 2.1	(Flux with halogens with resin) ROM1
BROFIL 60 B 2.2	(Flux with resin without halogens) ROM0
BROFIL 60 B 3.1	(Flux acid with urea) ORM1
BROFIL 60 B 3.2	(Flux acid without urea) INM1

GENERAL INFORMATION

The BROFIL 60 is a high purity alloy that is composed of 60% tin and 40% lead. This alloy accomplishes with the standards of ISO 9453:2015, alloy 103. It is fabricated by a special process that controls the inclusions of oxides and metallic and non-metallic impurities.

A common application of this solder is making permanent but reversible connections between copper pipes in plumbing systems. The greater the tin concentration, the greater the solders tensile and shear strength. Furthermore, this alloy can be used for electric component joinery, PCB soldering; copper plate solder and copper tube, stainless steel welding and other general purpose soldering.

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CUSTOMER ADDED VALUE

- It has a low melting point; 183ºC (solidus) and 191ºC (liquidus).
- Good wetting capacity and fluidity.
- Good electrical conductivity.

COMPATIBILITY AND CLEANING

This BROFIL 60 alloy is compatible with a wide variety of flux types that we also offer in our catalogue. For more information ask us for the corresponding technical data sheet.

ALLOY COMPOSITION (Sn60Pb40)

COMPOSITION	
Tin (Sn)	59,5-60,5
Lead (Pb)	Rem.
MAXIMUM IMPURITY LEVELS ACCORDING TO ISO 9453:2015	
Antimony (Sb)	0,20
Bismuth (Bi)	0,10
Gold (Au)	0,05
Copper (Cu)	0,08
Indium (In)	0,10
Silver (Ag)	0,10
Aluminum (Al)	0,001
Arsenic (As)	0,03
Cadmium (Cd)	0,002
Iron (Fe)	0,02
Nickel (Ni)	0,01
Zinc (Zn)	0,001

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STOAGE AND HANDLING

To avoid any undesirable damage, please follow these advices:

- Do not fire anything near storage area.
- Store in dry, cool and non-corrosive environment.
- While handling and processing, wear the personal protective equipment.
- Refer to the accompanying Material Safety Data Sheet (MSDS) for any specific emergency information.

SHELF LIFE

Following the previously named advices, the durability of this alloy when solid (without flux) is indefinite at room temperature. Consult the MSDS for additional precautions and procedures.

AVAILABLE FORMATS

Diameters from 0.5mm to 6mm.

Plastic reels of:

- 100 g.: 30 units/box
- 250 g.: 40 units/box
- 500 g.: 20 units/box
- 1 kg.: 10 units/box
- 2 kg and 4 kg: Under demand

** Other formats can be supplied.

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Broquetas, S.L. | C/ Can Sellarès, 12-14-16 | E- 08740 Sant Andreu de la Barca | Barcelona | Spain Tel.: +34 93 640 19 00 | broquetas@broquetas.com | www.broquetas.com
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