

HILDERBRAND® Precious Metal Brazing Pastes and Powders



HILDERBRAND® brazing pastes

Expertise, quality and reliability

HILDERBRAND® brazing pastes, which are often also called soldering pastes, are a homogeneous mixture of brazing alloy powder with a binder and, in certain cases, with a flux, depending on the heating technique. The alloy powder has the function of melting at the desired temperature, filling the gap by capillarity and assuring the joint strength after solidification. The binder assures easy and consistent dispensing and decomposes upon heating without leaving a residue. A flux is added when the parts to be brazed are heavily oxidized or when heating is done in air.

Features and benefits

- Improved production rate (time saving)
- Very precise deposit of brazing alloy (materiel savings)
- Brazing alloy and flux application in one step
- Easy to use
- The process can easily be automatized
- Focus on health and safety of users

Swiss Made - high quality products

Our goal is to supply top quality products to our customers. A global quality management program has been implemented and today all our products are compliant with the highest required standards in the jewelry and watch industry, respecting responsible business practices.

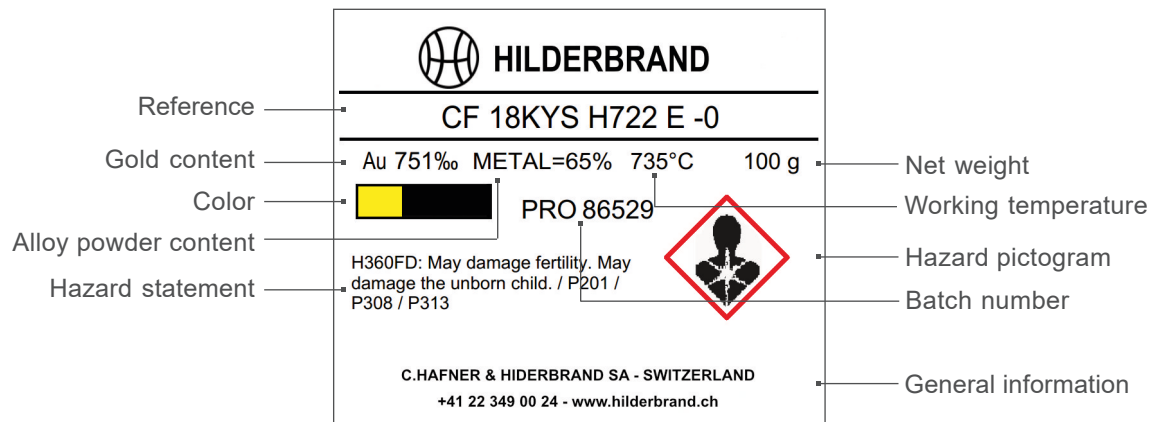
- Hilderbrand is **CoC** and **COP certified** in order to guarantee a responsible supply chain for precious metals, in strict compliance with the ethical criteria defined by the Responsible Jewellery Council (RJC).
- Hilderbrand received the **ISO certification** in 1999.
- All our products are compliant with **REACH** and **ROHS regulations**.



Premium Customer Service

- Expert advice based on over 40 years of experience
- Solutions to special requests
- Training courses available
- Delivery in standard packaging or according to customer needs
- Very short delivery time

Identification code of HILDERBRAND® brazing pastes



Identification of brazing pastes

1. CF / CNF	2. Alloy	3. Color	4. Working Temp.	5. Flux binder/ binder	6. Alloy powder content	7. Particle size
CF	18K	Y	S	H722	E -	0

1) CF / CNF

CF Cadmium free
CNF Cadmium and nickel free

2) Alloy

Refer to the lists of brazing alloys

3) Color

Refer to the lists of brazing alloys

Y Yellow
W White
P Pink
R Red

4) Working temperature

Refer to the lists of brazing alloys

H Hard
MH Medium-Hard
M Medium
S Soft
ES Extra-Soft

NB

For furnace applications, the furnace temperature should be approximately 100°C higher than the working temperature indicated on the label.

5) Flux binder / binder

For torch :
H722, H822, H511, P301, LR04
For resistance or induction heating:
H122, H9129, X108
For controlled atmosphere furnace:
H300, H350, H400, H600, H700, H910, P300, LR00
For vacuum furnace:
H800

6) Alloy powder content

For torch, resistance and induction heating:
E 65% / J 78%
For furnace under protective atmosphere:
R 89% / T 91% / W 94%

7) Particle size

2	Standard	Compatible needles	
1	Fine		
0	Extra-fine		

HILDERBRAND®

Precious metal brazing pastes and powders

Gold Brazing Alloys

18 Carat

Designation	Pd	Ni	Color	Working Temp.	Au ‰	Application
CF 18KYH		no		840 °C	751	Brazing 18 carat yellow gold
CF 18KYM		no		800 °C	751	Brazing 18 carat yellow gold
CF 18KYM		no		763 °C	751	Brazing 18 carat yellow gold
CF 18KYS		no		735 °C	751	Brazing 18 carat yellow gold
CF 18K3NX2		no		720 °C	751	Brazing 18 carat yellow gold
CF 18KYES6		no		670 °C	751	Brazing 18 carat yellow gold
CF 18KYES2		no		630 °C	751	Brazing 18 carat yellow gold
CNF 18KWH	yes	no		870 °C	751	Brazing 18 carat white gold
CNF 18KWM	yes	no		820 °C	751	Brazing 18 carat white gold
CNF 18KWS2	yes	no		770 °C	751	Brazing 18 carat white gold
CNF 18KWES		no		750 °C	751	Brazing 18 carat white gold
CF 18KRH2		no		820 °C	751	Brazing 18 carat red gold
CF 18KRM2		no		790 °C	751	Brazing 18 carat red gold
CF 18KPM		no		770 °C	751	Brazing 18 carat pink gold
CF 18KPS2		no		720 °C	751	Brazing 18 carat pink gold
CF 18KPS		no		710 °C	751	Brazing 18 carat pink gold

14 Carat

Designation	Pd	Ni	Color	Working Temp.	Au ‰	Application
CF 14KYH		no		785 °C	585	Brazing 14 carat yellow gold
CF 14KYM		no		760 °C	585	Brazing 14 carat yellow gold
CF 14KYS		no		720 °C	585	Brazing 14 carat yellow gold
CF 14KYES		no		630 °C	585	Brazing 14 carat yellow gold
CF 14KYES4		no		610 °C	585	Brazing 14 carat yellow gold
CNF 14KWH	yes	no		810 °C	585	Brazing 14 carat white gold
CNF 14KWM	yes	no		770 °C	585	Brazing 14 carat white gold
CNF 14KWS2	yes	no		730 °C	585	Brazing 14 carat white gold
CNF 14KWES		no		710 °C	585	Brazing 14 carat white gold
CF 14KRH		no		780 °C	585	Brazing 14 carat red gold
CF 14KPS		no		730 °C	585	Brazing 14 carat pink gold

All brazing alloys are also available as powders.

9 Carat

Designation	Pd	Ni	Color	Working Temp.	Au ‰	Brazing application
CF 9KYH		no		742 °C	375	9 carat yellow gold
CF 9KYM		no		720 °C	375	9 carat yellow gold
CF 9KYS		no		700 °C	375	9 carat yellow gold
CF 9KYES2		no		680 °C	375	9 carat yellow gold
CF 9KXS		no		550 °C	375	9 carat white gold
CF 9KWS		yes		710 °C	375	9 carat white gold
CNF 9KWES		no		650 °C	375	9 carat white gold
CF 9KPS		no		770 °C	375	9 carat pink gold

Other Carats

Designation	Pd	Ni	Color	Working Temp.	Au ‰	Brazing application
CF 12KYS		no		755 °C	500	12 carat yellow gold
CF 12KYES		no		715 °C	500	12 carat yellow gold
CF 10KYS		no		690 °C	416	10 carat yellow gold
CF 10KWS		yes		735 °C	416	10 carat white gold
CNF 10KWES		no		630 °C	416	and gold to stainless steel
CF 10KPS		no		760 °C	416	10 carat pink gold
CF 8KYS		no		695 °C	333	8 carat yellow gold
CF 950		no		750 °C	950	24 carat yellow gold
CF 22KYES		no		810 °C	916	22 carat yellow gold
CF 21KYS		no		770 °C	875	21 carat yellow gold
CF 19.2KPS		no		760 °C	800	19.2 carat pink gold
CF 800		no		280 °C	800	At low temperature

Brazing Alloys for Platinum

Designation	Pd	Ni	Working Temp.	Brazing application
CF PDA	yes	no	1000 °C	Platinum
CF PTM	yes	no	920 °C	Platinum
CF PTS	yes	no	880 °C	Platinum

Palladium Brazing Alloys

Designation	Composition	Working Temp.	Brazing application
CF PDXT2	Pd/Ag/Cu	970 °C	Stainless steel, good corrosion resistance
CF PDXT	Pd/Ag/Cu	950 °C	Stainless steel, good corrosion resistance
CF PD	Pd/Ag/Cu	900 °C	Stainless steel
CF PD100	Pd/Ag/Cu	850 °C	Stainless steel
CF PDAG	Pd/Ag/Ga	880 °C	Titanium

All brazing alloys are also available as powders.

Silver Brazing Alloys

Designation	Composition	Working Temp.	Application
CF 75	Ag/Cu/Zn	770 °C	Silver 925/1000
CF 72	Ag/Cu	775 °C	Vacuum brazing, vacuum components
CF 70	Ag/Cu/Zn	730 °C	Silver 925/1000
CF 67	Ag/Cu/Zn	680 °C	Silver 925/1000
CF 67AT	Ag/Cu/Zn	680 °C	Silver 925/1000 anti-tarnishing
CF 65	Ag/Cu/Zn	690 °C	Silver 925/1000
CF 65-2	Ag/Cu/Zn/Sn	640 °C	Silver 925/1000, low melting temperature
CF 60-1	Ag/Cu/Sn	720 °C	Food industry equipment, silver 800/1000
CF 56-2	Ag/Cu/Ni	895 °C	Stainless steel (for furnace brazing)
CF 56-4	Ag/Cu/Ni/In	720 °C	Stainless steel, copper and nickel alloys
CF 56	Ag/Cu/Zn/Sn	650 °C	Multipurpose brazing alloy, excellent fluidity, silver 800/1000
CF 54	Ag/Cu/Zn/Sn	630 °C	Multipurpose brazing alloy, very low working temperature
CF 50-2	Ag/Cu/Zn/Ni	680 °C	High mechanical strength, steel, copper alloys
CF 49-4	Ag/Cu/Zn/Ni/Mn	670 °C	Tungsten carbide inserts
CF 45	Ag/Cu/Zn/Sn	640 °C	Steel, copper alloys, electrical contacts
CF 42	Ag/Cu/Sn	570 °C	Very low working temperature, limited mechanical strength
CF 40	Ag/Cu/Zn/Sn	690 °C	Low working temperature, very high fluidity
CF 25	Ag/Cu/Zn/Sn	760 °C	Iron, copper and nickel alloys
CF 20	Ag/Cu/Zn/Si	810 °C	Copper alloys, steel (bronze color)
CF 5	Ag/Cu/Zn	870 °C	Steel (brass color)

Active Brazing Alloys

CF 72 Ti	Ag/Cu/Ti	900 °C	Titanium and ceramic
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Other Brazing Alloys

Designation	Composition	Working Temp.	Application
Copper			
CF Cu	Cu	1083 °C	Steel
CF CuMn3	Cu/Mn/Ni	1000 °C	Tungsten carbides to steel
CF 6-1	Cu/P/Ag	705 °C	Copper and nickel alloys, eyeglass industry
CF 0-6	Cu/P/Sn	700 °C	Copper and nickel alloys, eyeglass industry
Nickel			
CF 18H	Ni/Cr/Si/Fe/B	1000 °C	Stainless steel, excellent corrosion resistance, high fluidity (for well fitting joints), very hard, brittle
CF 5H	Ni/Cr/P	950 °C	
CF 16H	Ni/Cr/P	890 °C	
Tin			
CF 96-40	Sn/Ag	221 °C	Low temperature soldering

All brazing alloys are also available as powders.

Precious metal powders can be used for innovative applications such as Selective Laser Melting (SLM), Metal Injection Molding (MIM) and powder spraying.

HILDERBRAND®

Silver Alloy Powders

Designation	Color	Description
PM Ag935		935 Silver alloy powder (tarnish reduced)
PM Ag925		Sterling silver powder
PM Ag800		800 Silver alloy powder

Pure Metal Powders

Designation	Color	Description
Au 999		Fine Gold powder
Pt 999		Fine Platinum powder
Pd 999		Fine Palladium powder
Ag 999		Fine Silver powder

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Precious metal powders

Platinum Alloy Powders

Designation	Color	Description
952 PT P1 PtRu		Platinum with 48 % Ruthenium
951 PT P1 PtAu2		PlatinGold® with 20 % Gold
900 PT P2 PtRh10		Platinum with 100 % Rhodium
900 PT P1 PtIr10		Platinum mit 100 % Iridium
800 PT P1 PtIr20		Platinum mit 200 % Iridium

Gold Alloy Powders

Designation	Color	Description
PM 18K3N 751 GG P5		18 Carat yellow Gold (3N) powder
PM 18K4N 751 RS P5		18 Carat pink Gold (4N) powder
PM 18K5N 751 RT P5		18 Carat red Gold (5N) powder
PM 18KPd130 751 WG P2		18 Carat white Gold powder with 130 % Pd
PM 18KPd150 751 WG P1		18 Carat white Gold powder with 150 % Pd

Palladium Alloy Powders

Désignation	Couleur	Description
PM Pd500Rh		Palladin Royal® - Poudre alliage Palladium Rhodium

Other compositions are available on request.
The particle size distribution can be adjusted to the needs of the customer.



Mission & Vision

C.HAFNER & HILDERBRAND provides metal joining solutions primarily focused on HILDERBRAND® precious metal brazing pastes. Our products meet the highest requirements for any luxury & industry customer in search of the finest Swiss Made quality. We deliver our products worldwide. By extension we provide precious metal alloys including but not limited to gold, palladium, platinum and silver alloys. We are committed to supporting our customers needs in semi-finished precious metal products, powders or finished components.



**Swiss-based company
World-renowned expertise
Customer-oriented**

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