Handy & Harman of Canada, Limited
Handy & Harman du Canada, Limitée
290 CARLINGVIEW DR., REXDALE, ONTARIO M9W 5G1
Phone: (416) 675-1860 · (800) 463-1465 Fax: (416) 675-1956 · (800) 426-3907

TECHNICAL DATA SHEET

BRAZE 300

Nominal Composition:

Silver:	30.0% ± 1.0%
Copper:	38.0% ± 1.0%
Zinc:	32.0% ± 2.0%
All Others:	0.15% maximum

Physical Properties:

Colour:	Light Yellow
Solidus (Melting Point):	675°C (1250°F)
Liquidus (Flow Point)	765°C (1410°F)
Specific Gravity	8.84
Density (Troy oz/cu in)	4.66
Electrical Conductivity (%IACS)	24.4
Electrical Resistivity (Microohm-cm)	6.85

Uses:

Braze 300 is a good general purpose, intermediate temperature brazing alloy for use on copper, brass, nickel-silver, bronze, steel and other nonferrous alloys melting above 765°C (1450°F). Uses include the brazing of nickel-silver hollow knife handles and electrical equipment. It is particularly adaptable to metal bath dip brazing of fine wires for radio, small transformer and electronic assemblies because its flow point matches the fluid temperature of borax. Borax is used as a metal bath flux cover because it is less corrosive to ceramic pot linings than Handy Flux. Braze 300 exhibits better stability than lower melting alloys when used for metal bath dip brazing.

Brazing Characteristics:

Braze 300 is an intermediate temperature silver brazing alloy with a fairly long (70°C/160°F) melting range. This long melting range is helpful when wide gap joints are brazed and is useful in producing large joint fillets to reduce the notch effect on stressed assemblies. Where higher brazing temperature and characteristics of this alloy are permissible, the lower silver content affords a saving. Handy Flux should be used with this alloy.

Properties of Brazed Joints:

Butt joints, in the listed metals, have been tested at room temperature with the following average results:

	Tensile Strength psi	Elongation % in 2”
Copper	30,000 – 35,000	15.0 – 25.0
Brass	35,000 – 45,000	16.0 – 31.0
Nickel-Silver	35,000 – 40,000	7.0 – 17.0

Corrosion Resistance:

Braze 300 is not considered to be particularly resistant to corrosion but tests have shown that, in general, it is as resistant as the metals with which it is customarily used.

The following corrosion tests have been made on Braze 300:

Solution	Test Temperature °C	Test Temperature °F	Conditions	Loss in Weight Mgs/dcm^2/day
5% Sulphuric Acid	Room		Constant Immersion	15.57
5% Sulphuric Acid	70	160	Constant Immersion	1115.5
10% Sulphuric Acid	Room		Constant Immersion	15.7
10% Sulphuric Acid	70	160	Constant Immersion	207.6
20% Sulphuric Acid	Room		Constant Immersion	13.9
20% Sulphuric Acid	70	160	Constant Immersion	181.1

Handy & Harman of Canada, Limited
Handy & Harman du Canada, Limitée
290 CARLINGVIEW DR., REXDALE, ONTARIO M9W 5G1
Phone: (416) 675-1860 · (800) 463-1465 Fax: (416) 675-1956 · (800) 426-3907

TECHNICAL DATA SHEET

BRAZE 300

In addition to the tests above, brazed joints of copper, brass and nickel-silver were subjected to corrosion tests. At the conclusion of these tests, the brazed joints showed less corrosion than the base metal and the brazing alloy stood up in relief where the base metal had dissolved faster at the joint.

Equivalent Specifications:

These standard specifications are provided for cross-referencing purposes only.

AWS A5.8-04	BAg-20
ASME Boiler & Pressure Vessel Code, SecII-C	BAg-20

Available Forms:

Strip, wire, powder and performs to specification. Also shot or grain for remelting use in metal bath dip brazing pots.

Comments:

Handy & Harman of Canada, Limited believes the information contained herein to be reliable. However, the technical information is given by Handy & Harman of Canada, Limited without charge and the user shall employ such information at its own discretion and risk, and Handy & Harman of Canada, Limited assumes no responsibility for results obtained or damages incurred from the use of such information in whole or in part.

Rev: 08/2004