LucasMilhaupt®
A Handy & Harman Company
Global Brazing Solutions®

Technical Data Sheet

EASY-FLO® 30 & EASY-FLO® 35
(SILVALOY® 30 & SILVALOY® 35)

NOMINAL COMPOSITION

	Easy - Flo 30	Easy-Flo 35
Silver	30.0% ± 1.0%	35.0% ± 1.0%
Copper	27.0% ± 1.0%	26.0% ± 1.0%
Zinc	23.0% ± 2.0%	21.0% ± 2.0%
Cadmium	20.0% ± 1.0%	18.0% ± 1.0%
Other Elements (Total)	0.15% Max	0.15% Max

PHYSICAL PROPERTIES

	Easy - Flo 30	Easy - Flo 35
Color	Light Yellow	Light Yellow
Melting Point (Solidus)	1125ºF (605ºC)	1125ºF (605ºC)
Flow Point (Liquidus)	1310ºF (710ºC)	1295ºF (700ºC)
Brazing Temperature Range	1310°F -1410°F (710°C - 766°C)	1310°F -1410°F (710°C - 766°C)
Specific Gravity	8.76	8.88
Density (Troy oz/in^3)	4.62	4.68
Electrical Conductivity (%IACS) [(1)]	31.0	28.6
Electrical Resistivity (Microhm-cm)	5.50	6.02

[(1)] IACS = International Annealed Copper Standard

PRODUCT USES

Easy-Flo 30 and Easy-Flo 35 are general purpose, low temperature silver base brazing filler metals for joining both ferrous and non-ferrous metals. Because of their fairly low cost, good fatigue strength and ability to make leak-tight joints where close clearances cannot be maintained, they have been widely used in the refrigeration and air-conditioning industry. Additional uses for these filler metals are tubular bicycle and furniture frames, where joint fit-up may be vary.

BRAZING CHARACTERISTICS

Easy-Flo 30 and Easy-Flo 35 are low temperature, economical, brazing filler metals capable of bridging gaps where tight joints fit-up cannot be maintained. These filler metals have a tendency to liquate (i.e., separate into low and high melting constituents) when heated slowly and therefore it is preferable to use them where the heat source is sufficient to raise the part temperature rapidly through the melting range of the brazing filler metal. Easy-Flo 30 tends to liquate slightly more than Easy-Flo 35. Handy® Flux is recommended for use with these filler metals.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. Butt joints of the listed metals have been tested at room temperature with the following typical results:

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PROPERTIES OF BRAZED JOINTS (CONT.)

	Tensile Strength (lbs/in^2)
SAE 1020 Steel	60,000

CORROSION RESISTANCE

In the presence of mild acids and/or alkalis the corrosion resistance of Easy-Flo 35 and Easy-Flo 30 is generally equal to or better than the corrosion resistance of the nonferrous metals that can be brazed. Under conditions of high humidity or salt spray exposure, joints on stainless steel are subject to interface corrosion. This condition can be inhibited by using a low temperature silver brazing filler metal containing nickel.

AVAILABLE FORMS

Wire, engineered preforms, specialty preforms per customer specification.

SPECIFICATIONS

Easy-Flo 30 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BAg-2a
- ASME Boiler & Pressure Vessel Code, Sec II-C, SFA-5.8 BAg-2a

Easy Flo 35 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BAg-2
- ASME Boiler & Pressure Vessel Code, Sec II-C, SFA-5.8 BAg-2
- Society of Automotive Engineers (SAE) / AMS 4768
- International Organization for Standardization (ISO) 17672 Ag 335
- British Standard (BS) EN 1044 Ag 305

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for Easy-Flo 30: A00000035, Legacy Codes: 31-300, 13334.

The applicable Lucas-Milhaupt product code(s) for Easy-Flo 35: A00000028, Legacy Codes: 31-350, 7849.

SAFETY PRECAUTIONS

Both alloys contain cadmium. Cadmium fumes are poisonous. These alloys should be used only in well-ventilated spaces with air movement which will carry brazing fumes away from the worker's face. Refer to ANSI Z49.1 entitled "Safety in Welding and Cutting", and the Lucas-Milhaupt Material Safety Data Sheet for detailed information.

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