235 Kilvert Street
Warwick, RI 02886

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PRODUCT: **SILVALOY® 50N**
(AWS BAg-3)

COMPOSITION:

Silver	50.0 wt%
Copper	15.5 wt%
Zinc	15.5 wt%
Cadmium	16.0 wt%
Nickel	3.0 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1170°F (630°C)
Liquidus	1270°F (690°C)
Brazing Range	1270-1500°F (690-815°C)
Specific Gravity	9.209
Density (T.oz./cu in)	4.853
Electrical Conductivity (% IACS)	18
Electrical Resistivity (Michrohm-cm)	9.58
Color	Light Yellow

DESCRIPTION:

SILVALOY 50N is a modification of **SILVALOY® 50**. It was originally introduced because of somewhat better corrosion resistance than **SILVALOY 50** for certain conditions, and is still used for such purposes. When melting, **SILVALOY 50N** passes from the solid state to a mushy or plastic range and progressively to a liquid. The largest portion of **SILVALOY 50N** melts in the upper section of its temperature range. Therefore, the alloy has a good body while in the plastic range and is suitable for building fillets or bridging large gaps. Late melting of the major portion of the alloy also helps minimize any separation of the solid and liquid portions by liquation during melting.

APPLICATIONS:

It has proven successful on many marine applications and for dairy equipment which must withstand strong cleaning solutions. The 3% nickel content of this alloy also improves its wetting of stainless steel and tungsten, or molybdenum carbide tool tips. At the present time, largest use of this solder is for attaching carbide cutting tips to tool shanks.

PRODUCT: **SILVALOY® 50N - CONTINUED (AWS BAg-3)**

SPECIFICATIONS:

AWS A5.8	BAg-3
ASME	BAg-3
QQ-B-654	Grade V
AMS	4771
MIL-B-15395	Grade V

AVAILABLE FORMS:

Standard forms of **SILVALOY 50N** are wire, strip, and preforms.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 50N** will surpass the strengths of the base metals. Strength is a function of the base metals being joined, type of joint, design of joint, joint clearances and brazing procedures. The recommended maximum operating temperature for **SILVALOY 50N** is up to 400°F in continuous service and up to 600°F in intermittent service.

SAFETY INFORMATION:

SILVALOY 50N contains cadmium and therefore upon heating may produce toxic fumes. It is essential that adequate ventilation be provided so that personnel will not inhale gases and fumes while brazing. The operation and maintenance of brazing equipment of facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For further information refer to the Material Safety Data Sheet for **SILVALOY 50N**.

LIABILITY-DISCLAIMER:

Wolverine Joining Technologies, LLC, seeks to represent reliable information concerning the composition, properties and use of its products. The technical information provided in this publication is provided at no charge and is without guarantee, warranty or responsibility of any kind, expressed or implied.

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