

## TECHNICAL DATA SHEET

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WARTON SOLDER PRODUCTS

# Activ8 Cored Solder Wire

### Acid Cored Solder Wire

#### Description

Activ8 is an acid cored solder wire for metal fabrication. Activ8 will solder brass, bronze, cadmium plating, copper, galvanised wire, iron, lead, mild steel, nickel and nickel plating, resistance wires (most types although flux residues should be removed), silver, spring steel, most stainless steels (using 96S), tinplate and zinc and zinc plating. Activ8 can be used for a variety of uses but should not be used on electronic assemblies.

#### Flux Residue

Residues of Activ8 would, under dry conditions, be non-corrosive. But as the work is usually exposed to humidity the residue after soldering would, over a period of time, absorb moisture, becoming mildly corrosive. The residue of Activ8 is simply removed with water (preferably warm), but where flame heating is employed the flux will be extensively volatilised by the soldering operation. In addition, it will not contaminate plating baths.

This flux residue, if not removed, is considerably less corrosive than most separate inorganic fluid or paste fluxes. If Activ8 is being used in place of stick solder and a fluid flux and the flux residue was not previously removed, there should be no need to do so when using Activ8 cored solder wire.

#### Properties

Flux Classification (J-STD-004B)	INH1
BS EN 29454 (1994)	3.1.1
Shelf Life (Stored in dry conditions) (10°C to 40°C)	2 Years

#### Availability

Product	Flux Content	Standard Packaging
Activ8	3%	0.25Kg, 0.5Kg, 2.5Kg, 3Kg, 5Kg, 10Kg, 15Kg and 25Kg reels

Other packaging options available. For more information on alternate packaging options please contact our sales team.

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### High Purity Solder Alloy

Standardization is important to reduce variety and to promote the quality of products by defining features and characteristics governing their fitness for purpose. The standards promote clear unambiguous communication between purchasers and suppliers for quotation ordering and supply purposes.

In 1994 a single European standard, EN 29453 (ISO 9453), superseded all other European national standards including: BS 219, DIN 1707, NFC 90-550. Other equivalent international standards include J-STD-006, ASTM B32 and JIS-Z-3382.

Warton High Purity Solder Alloys are manufactured using only the 'Highest Purity Virgin Materials' this being part of Warton's simple philosophy that the best raw materials lead to the best finished products.

Below shows a typical batch analysis of the High Purity Tin/Lead used in manufacturing High Purity 63/37.

#### Typical batch analysis: Tin

Sn	Sb	Pb	Cu	Zn	Fe	As	Ag	Bi	In
99.95	0.009	0.002	0.0002	0.0001	0.002	0.002	0.0001	0.0001	0.0003

#### Typical batch analysis: Lead

Sn	Sb	Pb	Cu	Zn	Fe	As	Ag	Bi	In
0.001	0.002	99.99	0.003	0.0001	0.002	0.0005	0.002	0.005	0.0003

#### Typical batch analysis: Warton High Purity 63/37

Sn	Sb	Pb	Cu	Zn	Fe	As	Ag	Bi	In
63.0	0.0095	remainder	0.0007	0.0002	0.002	0.001	0.0005	0.0003	0.0003

These consistent high standards apply not only to all of Warton's high purity solder alloys, but to its entire range of products, inclusive of flux cored and solid solders, liquid fluxes, cleaners and solder paste.

### Lead Free Solder Alloys

In accordance with REACH legislation and increasing environmental awareness Warton offer a complete range of 'lead free' alloys to suit all applications.

Warton's range of lead free solder alloys includes:

Alloy Name	Alloy Breakdown	Melting Temperature °C
Tin	Sn100	232
96S	Sn96.5/Ag3.5	221
Sn96.3Ag3.7	Sn96.3/Ag3.7	221
96/4	Sn96/Ag4	221
98S	Sn98/Ag2	221-226
TSC	Sn95.8/Ag3.5/Cu0.7	217-218
SAC405	Sn95.5/Ag4/Cu0.5	217-219
Sc100e	Cu0.5-0.7/Sn Rem	227
LM10A	Sn87/Ag10/Cu3	214-275
SACXP0307	Sn/Cu0.7/Ag0.3	217-227
SAC0307	Sn99/Ag0.3/Cu0.7	217-227
SAC305	Sn96.5/Ag3/Cu0.5	217-220
SAC300	Sn97/Ag3	221-224
SAC3	Sn96.7/Ag2.8/Cu0.5	217-220
SAC2	Sn97.5/Ag2/Cu0.5	217-220
SAC1	Sn99.2/Ag0.3/Cu0.5	217-220
97C	Sn97/Cu3	227-310
99C	Sn99.3/Cu0.7	227
95A	Sb4.5-5.5/Sn Rem	235-240

Key: Sn-Tin, Ag-Silver, Cu-Copper, Rem-Remainder

Other alloys available

### Leaded Solder Alloys

Warton are able to offer a comprehensive range of leaded solder alloys to 'Professional Users' which will be marked as **For Professional Use Only** in accordance with REACH regulations.

Warton's range of leaded solder alloys includes:

Alloy Name	Alloy Breakdown	Melting Temperature °C
60/40	Sn60/Pb40	183-190
63/37	Sn63/Pb37	183
50/50	Sn50/Pb50	183-215
45/55	Sn45/Pb55	183-226
40/60	Sn40/Pb60	183-238
35/65	Sn35/Pb65	183-245
30/70	Sn30/Pb70	183-255
20/80	Sn20/Pb80	183-280
10/90	Sn10/Pb90	268-302
Alloy 296 HMP	Sn5/Pb92/Ag3	296-301
15/85	Sn15/Pb85	226-290
LMP 62S	Sn62/Pb36/Ag2	179
TLS/5	Sn5/Pb94/Ag1	296-301
HMP 5S	Sn5/Pb93.5/Ag1.5	296-301
Sn10Pb88Ag2	Sn10/Pb88/Ag2	268-290
Alloy No1	Sn50/Pb48.6/Cu1.4	183-215
Alloy No2	Sn60/Pb38.2/Cu1.8	183-190
1/99	Sn1/Pb99	300
60/40 Ant	Sn60/Sb0.2-0.5/Pb Rem	183-188

Key: Sn-Tin, Pb-Lead, Ag-Silver, Cu-Copper, Sb-Antimony, Rem-Remainder

Other alloys available

Please note that not all alloys are available ex-stock and minimum order quantities may apply.

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### Wire gauge (Diameter)

The wire gauge (diameter) for Warton solid and flux cored solder wires is represented as SWG (Standard Wire Gauge). The equivalent imperial and metric values are shown below.

SWG	mm	Inch
10	3.25	0.128
11	2.95	0.116
12	2.64	0.104
13	2.34	0.092
14	2.03	0.080
16	1.63	0.064
18	1.22	0.04
20	0.914	0.036
21	0.813	0.032
22	0.711	0.028
24	0.599	0.022
26	0.457	0.018
28	0.375	0.014
30	0.315	0.012
32	0.274	0.010
34	0.234	0.009
36	0.193	0.008



### Other wire diameters available

Not all wire diameters available in all stocking units.

The information supplied in this technical data sheet is designed only as guidance for the safe use and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.