

# PureFlow-F SURFACE MOUNT QUALITY SOLDER

From the beginning DKL Metals Ltd have been committed to offering the electronic assembly market ultra-high purity solders and consumables, on-time and at competitive prices. In keeping with this policy we are pleased to introduce our **PureFlow-F SMQ** (Surface Mount Quality) solder bar thus setting even higher standards of purity and performance.

All **PureFlow** solders are manufactured from high grade refined virgin metals and, by means of a special anti-drossing treatment during manufacture will show a marked reduction in dross formation in all assembly

## Compliance

		Typical E-Qual	ISO 9453	ISO 9453	Max. Rec.
Element		SMQ %	Alloy 104	Alloy 103	in use
Tin	Sn	59.80	59.5–60.5	59.5-60.5	N/A
		%max	%max	%max	%max
Antimony	Sb	0.02	0.05	0.20	0.20
Copper	Cu	0.0005	0.05	0.05	**0.25
Zinc	Zn	0.0002	0.001	0.001	0.002
Iron	Fe	0.001	0.02	0.02	0.01
Arsenic	As	0.002	0.03	0.03	0.01
Nickel	Ni	0.001	***	***	0.01
Bismuth	Bi	0.01	0.05	0.10	0.01
Cadmium	Cd	0.0002	0.002	0.002	0.002
Silver	Ag	0.001	***	***	***
Gold	Au	0.001	***	***	**0.25
Aluminium	Al	0.0001	0.001	0.001	0.002
			*0.08	*0.08	

- \*= Sum of all impurities except Sb, Bi and Cu
- \*\*= Combined total
- \*\*\*= Not specified

### Benefits

- Consistent, clean well formed joints
- High yields, low production costs
- Reduction in icicling and bridging
- Low fillets
- Reduced product usage and machine maintenance
- Meets or exceeds all Internationally recognised Standards
- Optimum performance and batch consistency





#### **Quality Control and Analysis**

All **PureFlow** solder alloys are manufactured in accordance with our Quality Management System. In February 1991 DKL Metals were amongst the first in the industry to gain third party accreditation for their Quality Management System, which was then BS 5750 Part 2. DKL has continued to maintain and update their QMS in line with the changing requirements of the Quality Standard. Strict quality control procedures are undertaken at every stage of manufacture. Each bar is marked at the time of moulding, with both grade of solder and the unique batch number. This allows for complete and accurate batch make-up and analysis details to be retained for every bar produced. Unlike many solder alloy producers we offer a free regular solder analysis service for a check on bath contamination levels. We will also give advice on contamination levels to ensure that the quality of your solder is maintained within strict operating parameters.

#### **Economy**

**PureFlow** solders are always competitively priced, however the initial purchase price is not the only governing factor with regards to economy; the rate of dross formation can vary greatly from alloy to alloy thus considerable material may be lost in this way. By means of a special anti-drossing treatment during the manufacturing stage **PurFlow** solders will show a marked reduction in the rate of dross formation when compared to untreated material. Such treatment is effective for some time during the solder's use and provided top-up material is **E-Qual**, then continued good results are obtained. Nonetheless, even **PureFlow** solder inevitably does produce some dross, and in order to assist with handling/safety regulations, dross containers with re-sealable lids are available to our customers, free of charge.

#### Fluxes

We have a comprehensive range of fluxes, cleaners, thinners and additives for most assembly applications. We would be pleased to discuss your specific requirements and supply appropriate data sheets as necessary.

FORMS	STYLE	NOMINAL WEIGHT	DIMENSIONS/ DIAMETERS	STANDARD PACKING
<b>34 34 34</b> ⊙	Autofeed Ingot	5kg	500 x 45 x 33mm	5kg
□ 212 E-Qual SMQ	Autofeed Ingot	2kg	330 x 45 x 15mm	24kg Carton
<b>3</b> € <b>3</b> €	Bar	1kg	300 x 32 x 12mm	25kg Carton
<del>24</del> 24 24	Bar	500g	505 x 22 x 6mm	25kg Carton
	Chunks	-	-	15kg Carton

#### **Packaging**

Special packaging arrangements, particularly for export orders can be accommodated on request.

The information given in this technical data sheet is to the best of our knowledge accurate. It is intended to be helpful but no warranty is expressed or implied regarding the accuracy of such data. It is the users responsibility to determine the suitability of his own use of the product described herein: and since conditions of use are beyond our control, we disclaim all liability with respect to the use of any material supplied by us. Nothing contained herein shall be construed as permission or as recommendations to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention without a license from the patent owner nor as recommendation to use any product or to practice any patented invention of any law or any patented invention of any law or any patented invention of any law or any patented invention and the patented invention of any law or any patented invention of any

**DKL Metals Limited** 

Bo'ness Road, Grangemouth, FK3 9XF, U.K.

Telephone: +44(0) 1506 847710
E-mail: sales@dklmetals.co.uk Web: www.dklmetals.co.uk

Issue 2 July 2020 Reviewed 12/02/2025