



**DKL METALS LTD**  
**LEAD FREE SOLDER FOR ALL PLUMBING APPLICATION**



DKL Metals are the UK's leading independent manufacturer of lead free solders and metal alloys.

Our current range of Lead-free solder for plumbing application is produced in E.U. and comply to both **BS EN ISO 9453:2014 Table 3, Alloy No.401** and also **BS EN 29453:1994 Alloy No.23**.

Each reel of “Lead Free” Solder wire is **500g**, labeled with our brand **DKL**, associated standard and **batch #** for ease of tracking and quality assurance purpose.

Below is the specification of **BS EN ISO 9453:2014** that our “Lead Free” Solder wire (Tin-copper Alloy 401):

**Table 3 — Chemical compositions of lead-free solder alloys**  
**(tin-antimony, tin-bismuth, tin-copper, tin-indium, tin-silver and more complex compositions)**

Group	Alloy No. <sup>a</sup>	Alloy Designation	Melting or solidus/liquidus temperature °C <sup>b</sup>	Chemical composition, mass fraction in % <sup>c,d</sup>														Other Elements
				Sn	Pb <sup>e</sup>	Sb	Bi	Cu	Au	In	Ag	Al	As	Cd	Fe	Ni	Zn	
Tin-antimony	201	Sn95Sb5	235/240	Rem	0,07	4,5 to 5,5	0,10	0,05	0,05	0,10	0,10	0,001	0,03	0,002	0,02	0,01	0,001	
Bismuth-tin	301	Bi58Sn42	139	41 to 43	0,07	0,10	Rem	0,05	0,05	0,10	0,10	0,001	0,03	0,002	0,02	0,01	0,001	
Tin-bismuth-copper-indium	302	Sn96,9Bi1,7Cu0,8In0,6	217/218	Rem	0,07	0,10	1,5 to 1,9	0,5 to 0,9	0,05	0,4 to 0,8	0,10	0,001	0,03	0,002	0,02	0,01	0,001	P 0,01 to 0,1
Tin-copper	401	Sn99,3Cu0,7	227	Rem	0,07	0,10	0,10	0,5 to 0,9	0,05	0,10	0,10	0,001	0,03	0,002	0,02	0,01	0,001	
	402	Sn97Cu3	227/310	Rem	0,07	0,10	0,10	2,5 to 3,5	0,05	0,10	0,10	0,001	0,03	0,002	0,02	0,01	0,001	