



KHOSLA ENGG.
PVT. LTD., PUNE.

PRODUCT SPECIFICATION

TITLE: LEAD FREE SOLDER
SOLID WIRE/STICKS/ BARS

Ref No. : PDS/928

ISSUE NO. : 01

REV. NO. : 0

DATE : 19.07.2016

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1. **SCOPE:** This solder covers the lead free solder solid wire/sticks / bars to avoid environmental hazardous lead.

2. **GENERAL:** This Lead Free solders are manufactured from virgin quality to non-ferrous metals.

3. CHEMICAL COMPOSITION:

ALLOY	% TIN	% Cu	% Ag	% Zn	% Sb	% Bi	% In	Melting Point/Range °C
Sn 42 Bi58	42±0.5	-----	-----	-----	-----	58±0.5	-----	138°C
Sn 77 In20Ag3	77±0.5	-----	3±0.3	-----	-----	-----	20±0.5	179 - 189°C
Sn 95 Sb5	95±0.5	-----	-----	-----	5±0.5	-----	-----	240 - 232°C
Sn 99.3 Cu 0.7	99.3±0.2	0.7 ±0.2	-----	-----	-----	-----	-----	227 - 228°C
Sn 98 Cu2	98±0.5	2±0.3	-----	-----	-----	-----	-----	221 - 226°C
Sn 96.5 Ag3.5	96.5±0.3	-----	3.5±0.3	-----	-----	-----	-----	221°C
Sn96.2 Ag2.5Cu0.8Sb0.5	96.2±0.2	0.8±0.2	2.5±0.2	-----	0.5±0.2	-----	-----	213 - 218°C
Sn96.3 Ag3.2Cu0.5	96.3±0.2	0.5±0.2	3.2±0.3	-----	-----	-----	-----	217 - 218°C
Sn90 Bi7.5 Ag2 Cu0.5	90±0.5	0.5±0.2	2±0.3	-----	-----	7.5±0.3	-----	186 - 212°C
40Sn 60Zn	40±0.5	-----	-----	60±0.5	-----	-----	-----	198 -370°C
60Sn 40Zn	60±0.5	-----	-----	40±0.5	-----	-----	-----	199 -352°C
70Sn 30Zn	70±0.5	-----	-----	30±0.5	-----	-----	-----	196-307°C
80Sn 20Zn	80±0.5	-----	-----	20±0.5	-----	-----	-----	196-268°C

The specified Tin percent is maintained within 0.5%. Also total max. Impurities are controlled within 0.25%.

4. IMPURITIES :

The maximum impurity levels will be as below :

Element	% of Element
Antimony	0.2%
Copper	0.1%
Arsenic	0.05%
Iron	0.02%
Aluminum	0.001%
Zinc	0.005%
Cadmium	0.005%
Others	0.08%



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5. DIMENSIONS:

1. **Solid solder wire**- For solid wire dia 0.45mm to 6.5mm \pm 0.05mm
2. **Machine extruded round solder sticks :**
 - a) Diameter:- 8 to 12mm \pm 0.5mm
 - b) Length: - As per customer requirements.
3. **Casted and m/c extruded Solder Sticks in Trapezoidal shape**

Parameter	Casted solder stick	M/c extruded solder stick
Bottom width (BW)	5mm-8mm \pm 1mm	5mm-8mm \pm 1mm
Top width (TW)	8mm-15mm \pm 1mm	8mm-15mm \pm 1mm
Height (H)	7 to 15mm \pm 2mm	7 to 15mm \pm 2mm
Length (L)	320-325mm	As per customer requirement \pm 5mm

6. HANDLING AND STORAGE:

5kgs polythene bag packing for sticks.

7. SHELF LIFE:

These solders have infinite shelf life.

8. SPECIAL INSTRUCTIONS:

Correct alloy should be selected depending on the application.

Prepared By :
HOD Q.A.

Approved By :
Vice President (Ops.)

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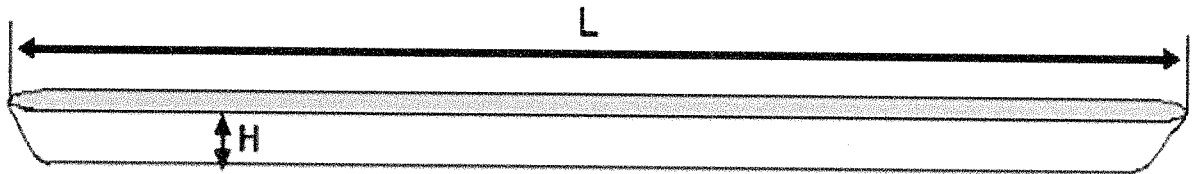
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DIAGRAM : CASTED SOLDER STICKS



TOP SIDE



3D VIEW

BW - Bottom width
TW - Top width
H - Height
L - Length

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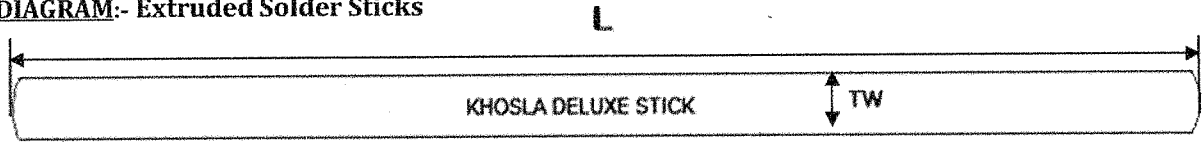
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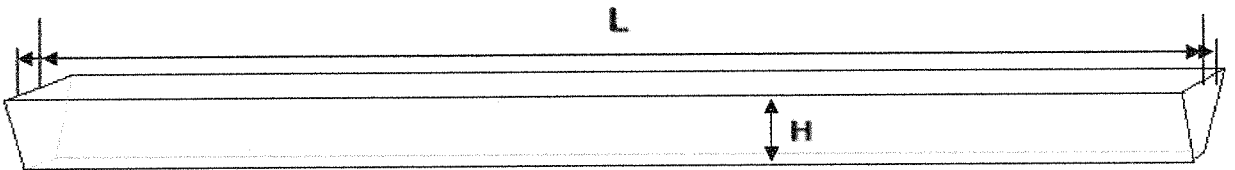
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DIAGRAM:- Extruded Solder Sticks



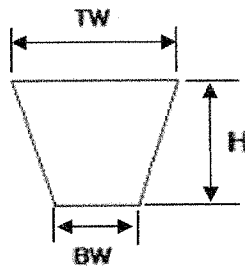
TOP SIDE



3D VIEW



BOTTOM SIDE



FRONT SIDE

BW - Bottom width
 TW - Top width
 H - Height
 L - Length

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