



**KHOSLA ENGG.  
PVT. LTD., PUNE.**

# PRODUCT SPECIFICATION

**TITLE: HIGH PURITY  
ALUMINIUM METALLIZATION  
WIRE**

**Ref No. : PDS/932**

**ISSUE NO. : 01**

**REV. NO. : 01**

**DATE : 01.12.2017**

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- SCOPE:** This specification covers high purity aluminum wire majorly used for metals spraying & vapor metalizing.
- GENERAL:** Aluminum wires manufactured from high purity virgin quality aluminum ingots through casting & rolling process.

**3. CHEMICAL COMPOSITION:** Reference Standard **ISO 209-1:2007, EN 573-3:2009**

Grade →	KE 1100	KE 1050	KE 1350	KE 1080	KE 1085	KE1090	KE 1199
<b>AL</b>	99.00 % (Min)	99.50 % (Min)	99.50 % (Min)	99.80 % (Min)	99.85% (Min)	99.90 % (Min)	99.99% (Min)
<b>Si</b>	0.95% (Max)	0.25% (Max)	0.10 % (Max)	0.15 % (Max)	0.10 % (Max)	0.07% (Max)	0.006 % (Max)
<b>Fe</b>		0.40% (Max)	0.40 % (Max)	0.15 % (Max)	0.12 % (Max)	0.07% (Max)	0.006 % (Max)
<b>Cu</b>	0.05 to 0.20% (max)	0.05% (Max)	0.05 % (Max)	0.03 % (Max)	0.03 % (Max)	0.02% (Max)	0.006 % (Max)
<b>Mn</b>	0.05%(Max)	0.05% (Max)	0.01 % (Max)	0.02 % (Max)	0.02 % (Max)	0.01% (Max)	0.002% (Max)
<b>Mg</b>	Traces	0.05% (Max)	-	0.02 % (Max)	0.02% (Max)	0.01% (Max)	0.006% (Max)
<b>Zn</b>	0.10% (Max)	0.07% (Max)	0.05 % (Max)	0.06 % (Max)	0.03% (Max)	0.03% (Max)	0.006% (Max)
<b>Ti</b>	-	0.05% (Max)	-	0.02 % (Max)	0.02% (Max)	0.01% (Max)	0.002% (Max)
<b>Ga</b>	-	-	0.03 % (Max)	0.03 % (Max)	0.03% (Max)	0.03% (Max)	0.005% (Max)
<b>V</b>	-	-	-	-	0.05% (Max)	0.05% (Max)	0.005% (Max)
<b>Other s</b>	0.15 % (Max)	0.03% (Max)	0.03 % (Max)	0.02 % (Max)	0.01% (Max)	0.01% (Max)	0.002% (Max)

**4. SIZE:** Aluminum Wires having sizes :

- φ 4.76 mm with tolerance of +0.00 mm and - 0.07 mm.
  - φ 3.175 mm with tolerance of +0.00 mm and - 0.07 mm.
  - φ 2.50 mm with tolerance of +0.00 mm and - 0.05 mm.
  - φ 2.30 mm with tolerance of +0.00 mm and - 0.05 mm.
  - φ 2.00 mm with tolerance of +0.00 mm and - 0.05 mm.
  - φ 1.60 mm with tolerance of +0.00 mm and - 0.05 mm.
- And as per customer Requirement from φ 9.50 mm to φ 1.60 mm.

**2. PHYSICAL PROPERTIES:** Reference Standard : **ASTM B 233**

	As drawn (un annealed)	Annealed
Elongation	4 - 10 %	25 % to 60 %
Tensile Strength	125 - 180 N/mm <sup>2</sup>	70 - 120 N/mm <sup>2</sup>

Melting Point : 660 °C  
Boiling Point : 2519 °C  
Density : 2.70 gm / cc

**6. SAMPLING PLAN :** One sample per 1ton lot.

**7. ACCEPTANCE CRITERIA:**

- 1) Aluminum wire should be free from burrs, cut's kinks, bends etc.
- 2) Aluminum wire should be bright shiny in appearance.
- 3) Twist test: Wire should not split.
- 4) Uniform Size.



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**8.HANDLING AND STORAGE:** Aluminum Wire is supplied in :

- Paper fiber Drum from 50 kg to 125 kg
- Loose coils approx.20-25 kg.
- 2 Kg to 10 Kg Plastic Spool

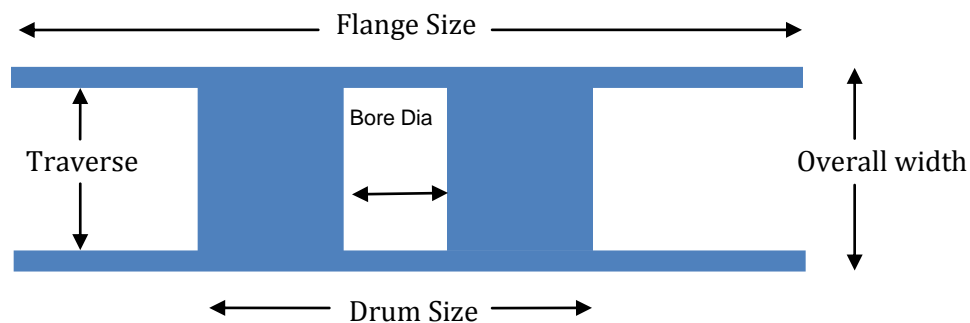
Other Packing Available as per Customer Requirement.

**9.SHELF- LIFE:** Aluminum wire has Infinite Shelf Life if Stored in Controlled Conditions.

**10.** High Purity Aluminum Wire is supplied in Plastic Spool of -(Tolerance -  $\pm 3$  mm)

**Available Spool Sizes**

Sr. No.	Type	Flange Size(in-mm)	Bore dia(in-mm)	Drum Size(in-mm)	Traverse (in-mm)	Overall width(in-mm)	Capacity (in Kgs)
1	KE 340	340	51.5	135	120	130	15
2	KE 320	320	38	120	65	78	10
3	KE 311	311	39	121	71	82	9.5
4	KE 305	305	38	125	60	82	8
5	KE 300	300	51.5	212	85	98	6
6	KE 270	270	52	148	89.9	103	7.1
7	KE 254	255	52	125	92	103	6.5
8	KE 200	200	51.5	105	45	55	2



**Prepared By :  
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**Approved By :  
Vice President (Ops.)**

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