

PROVISIONAL SPECIFICATION

No. OFV/12.7mm Bullet Envelope /Bimetal Cup Rev No.04

Bimetal Cup for 12.7mm API/APIT BULLET ENVELOPE

BIMETAL (Steel cladded on both side with Tombac (CuZn10))

1	Scope :-
1.1	This standard covers the requirements of Bimetal Cup for 12.7mm API/APIT Bullet Envelope (Annealed and washed) Cladded with Tombac on both side of steel layer. (Drg. No V12.7/PROD/057) with latest version
2.0	Description of Material for Bimetal Cup:-
2.1	Bimetal cups should be manufactured using Bimetal strips which are Hot Rolled Steel strip cladded on both sides by Tombac.
2.1.1	The Tombac layer thickness on Bimetal strip should be 4 to 6% of steel layer thickness.
2.1.2	The Bimetal cups should be blanked and drawn from Bimetal strips having following mechanical properties : Tensile Strength : 27 to 37 kgf/mm ² (265 to 363 N/mm ²) and Minimum elongation % : minimum 27. Supplier should provide the NABL certificate confirming above mechanical properties.
2.2	Hardness of Annealed Cup at centre of Dome and longitudinal Wall surface centre should lie within 70-90 V.P.N. at load 5kg.
2.3	Weight of cup should be within 14.30 ^{±0.50} gm.
2.4	For geometrical dimensions, the latest version of Bimetal Cup Drg. No V12.7/PROD/057 with latest version should be followed.
2.5	The surface of the cup wall from inside and outside should be free from any blisters, cracks, rolling skin, rolling impurities bubbles, scratches, torn and Burnt spots, peeling of cladded metal alloy layer.
3.0	Chemical Composition of Bimetal: The following chemical composition of Bimetal strip should be ensured along with NABL certificate.
3.1.	Chemical composition of the Steel in Bimetal strip or Bar should comply with norms indicated below:
3.1.1	Carbon : 0.05% to 0.12% (Deviation allowed ± 0.01%)
3.1.2	Silicon : 0.06% Maximum
3.1.3	Manganese : 0.30% to 0.50% (Deviation allowed ± 0.03%)
3.1.4	Chromium : 0.15% Maximum
3.1.5	Sulphur : 0.04% Maximum
3.1.6	Phosphorous : Maximum 0.035% (Deviation allowed ± 0.005%)

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3.1.7	Residual content of Copper :	0.20% Maximum
3.1.8	Residual content of Nickel :	0.25% Maximum
3.1.9	Arsenic	: 0.08% Maximum
3.3	Tombac is the cladded material coated on both side of steel layer in Bimetal Cup and Chemical Composition of Tombac should comply with norms indicated below:	
3.3.1	Copper	: 88% to 91%
3.3.2	Lead	: 0.03% Maximum
3.3.3	Iron	: 0.100% Maximum
3.3.4	Antimony	: 0.005% Maximum
3.3.5	Bismuth	: 0.002% Maximum
3.3.6	Phosphorous	: 0.01% Maximum
3.3.7	Zinc	: Remaining Percentage of above

DO/CASE

QIC/CASE

JWM/12.7mm

GO/CASE

CO/CASE