



GJ-102

Basic type agglomerated flux

GB/T 5293-2018

NB/T 47018.4-2017

Product description

Basic Information

BASICITY:	2.5 (high basic)
GRAIN SIZE:	10-60 mesh
DENSITY:	1.0 g/cm ³
PACKAGING:	25 kg plastic valve bags, 500/1000 kg large bags

Application

- > A high basicity sintered flux with very low sulfur and phosphorus content, providing excellent low temperature impact toughness and crack resistance.
- > The high basic slag system produces very clean weld metal with low inclusion content, suitable for welding critical pressure vessels and heavy structures.
- > When paired with nickel-alloyed wires (such as W106, W108), suitable for welding low temperature pressure vessel steels (3.5Ni, 5Ni) requiring impact toughness down to -60C to -100C.
- > Suitable for nuclear power equipment, LNG storage tanks, cryogenic pressure vessels, and other critical applications requiring ultra-low temperature toughness.

Main constituents

SiO ₂ +TiO ₂	CaO+MgO	Al ₂ O ₃ +MnO	CaF ₂	S	P
10-20	35-45	15-25	~20	<0.02	<0.03

Mechanical Properties of Deposited Metal

Wire	Yield ≥MPa	Tensile ≥MPa	Elongation ≥%	Impact -60C ≥J
Ni-alloyed (W106)	400	490-650	22	27

Note:

High basic sintered flux with high moisture absorption. Must be dried at 300-350C for 2 hours before use. For cryogenic applications, strict moisture control is essential.

Wire cleaning: Use properly cleaned wire with low residual elements. Wire chemistry must be qualified for the required low temperature service.

Groove cleaning: Extreme cleanliness required. Remove all oil, rust, paint, and moisture from groove and adjacent areas. Preheat per WPS requirements.

Parameter selection: Conduct full process qualification including Charpy impact testing at the required service temperature. Interpass temperature and heat input control are critical for low temperature toughness.