



## XUN-225 Agglomerated Flux for S.A. Welding

|                |                  |                 |
|----------------|------------------|-----------------|
| Specification: | EN760            | AWS A5.17/A5.23 |
| Classification | SA FB 1 55 AC H5 | F8P0-EB2-B2     |
|                |                  | F8P2-EB3-B3     |

**Characteristics:** XUN-225 is an agglomerated fluoride-basic type flux with high basicity

- Grain size: 10 to 60 mesh.
- Metallurgical behavior: Low silicon pick-up and the behavior of manganese is neutral.
- Grain size: 10 - 60 mesh.
- Basicity: 2.4 (BIIW).
- Diffusion hydrogen content is less than 3ml/100g in deposited metal.
- There are low levels of residue elements in deposited metal.
- The weld metal shows excellent resistance to temper and in-service embrittlement.
- XUN-225 has excellent welding technology properties. It is suitable for narrow gap welding. Regularly shaped welds are deposited without reduction of area or interface notches. Slag detachability is good.
- The flux has low moisture pick-up and granular stability. Flux shall be capable of meeting the applied requirements.
- Redrying instruction: The flux has to be redried before use for appr.2h at 300-350℃

**Main Constituents (%)**

| SiO <sub>2</sub> +TiO <sub>2</sub> | CaO+MgO | Al <sub>2</sub> O <sub>3</sub> +MnO | CaF <sub>2</sub> |
|------------------------------------|---------|-------------------------------------|------------------|
| 15                                 | 40      | 20                                  | 25               |

**Mechanical properties of deposited metal**

| Wire         | Yield strength<br>(MPa) | Tensile strength<br>(MPa) | Elongation<br>(%) | Charpy V notch impact strength<br>(J) |      | Heat treatment |
|--------------|-------------------------|---------------------------|-------------------|---------------------------------------|------|----------------|
|              |                         |                           |                   | -20℃                                  | -40℃ |                |
| GLES-30CrMo1 | ≥470                    | 550-700                   | ≥22               | ≥80                                   | -    | 650℃×4h        |
| GLES-20CrMo2 | ≥500                    | 600-750                   | ≥22               | -                                     | ≥80  | 690℃×4h        |

**Chemical composition of deposited metal (%)**

| Wire         | C         | Si        | Mn      | P     | S     | Cr       | Mo  |
|--------------|-----------|-----------|---------|-------|-------|----------|-----|
| GLES-30CrMo1 | 0.05-0.08 | 0.15-0.30 | 0.7-1.0 | 0.010 | 0.004 | 1.0-1.35 | 0.5 |
| GLES-20CrMo2 | 0.05-0.08 | 0.15-0.30 | 0.5-0.8 | 0.010 | 0.004 | 2.0-2.5  | 1.0 |

**Applications:** Multi-layer welding of 1~1.25Cr-0.5Mo and 2.25%Cr-1Mo heat resisting steels for boiler drums main steam tubes, superheated steam tubes and chemical engineering apparatus.

**Welding recommendation:** Suitable for single wire welding multi-layer

- The flux should be welded on DC +
- Preheating and interpass temperature:200-300℃
- Heat input: should be less than 20KJ/cm.

**Material to be welded**

**Boiler and pressure vessels**

1Cr-0.5Mo 2.25Cr-1Mo P23 P24