



**FOR IMMEDIATE RELEASE:**

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**ESAB LAUNCHES NEW LINE OF B2 FILLER METALS  
FOR WELDING ASTM A335 GRADE P11 Cr-Mo ALLOYED STEELS**

*North Bethesda, Md. (USA)* – With the introduction of its B2 SC electrodes and fluxes for SMAW, GTAW and SAW of creep resistant, 1.25% Cr, 0.5% Mo alloyed steels, SA-387 Grade 1, ASTM A335 Grade P11 and similar materials, ESAB Corporation now offers a completely modernised line of filler metal formulations for chrome-molybdenum weldments in the refinery, petrochemical, power generation and pressure vessel applications. ESAB launched a line of B3 SC filler metals last year.

“ESAB B2 SC and B3 SC filler metals have very strict control of chemistry and very low levels of impurity elements. Weldments have an X-bar, or Bruscato Factor, of maximum 10 to reduce susceptibility to temper embrittlement,” says Markus Gustafsson, R&D Filler Metal Manager ESAB. “These new filler metals meet the demanding requirements for chemical properties and offer high toughness in the post-weld heat treated conditions, as well as after step cooling treatment. The weld metal is also designed for increased rupture resistance at high service temperatures.”

The Bruscato Factor (X-bar) is a compositional formula ( $X\text{-bar} = (10P + 5Sb + 4Sn + As)/100$  (values in ppm)) to evaluate the materials susceptibility to temper embrittlement, with lower numbers indicating better resistance. ESAB’s previous B2 and B3 electrodes and fluxes had a maximum X-bar of 15. All current B2 SC and B3 SC have an X-bar of maximum 10, with a nominal value of around 7 for SMAW, GTAW and SAW weld metals to provide an important margin when meeting end-user requirements.

“To help our customers choose the correct filler metal and flux and ensure compliance to weld procedure specifications, data sheets for ESAB B2 SC and B3 SC products provide the chemical composition, X-bar data and mechanical properties in standard and industry applied post-weld heat treated conditions,” says Gustafsson.

**The new filler materials include:**



- GTAW rods: OK Tigrod B2 SC (SFA/AWS A5.28 ER80S-B2, EN ISO 21952-A: W Z CrMo1Si, EN ISO 21952-B: W 55 I1 1C1M). They are available in diameters from 1.6 to 3.2 mm and cut lengths of 1000 mm.
- SMAW electrodes: OK B2 SC (SFA/AWS A5.5 E8018-B2-H4R, EN ISO 3580-A: E CrMo1B 42 H5). They are available in diameters from 2.5 to 5.0 mm. These electrodes offer outstanding arc stability and slag detachability with almost no spatter.
- SAW:
  - Wires: OK Autrod B2 SC (SFA/AWS A5.23 EB2R, EN ISO 24598-A: S S CrMo1). They are available in diameters from 2.0 to 4.0 mm and come in 30 kg wire baskets or 280 kg BigDrums.
  - Flux: OK Flux 10.66 (EN ISO 14174: S A FB 1 55 AC H5). This flux offers excellent weldability, even in advanced narrow gap joints, with smooth wetting to the side wall and excellent slag detachability.
  - Weld metal: The flux wire combination OK Flux 10.66 + OK Autrod B2 SC is classified to SFA/AWS A5.23 F8P4-EB2R-B2R and EN ISO 24598-A: S S CrMo1 FB

For welding Cr-Mo applications that do not require an X-bar factor of maximum 10, ESAB offers Dual Shield CrMo1, a rutile FCAW electrode (SFA/AWS A5.29 E81T1-B2M, EN ISO 17634-A: T CrMo1 P M2 H5) and OK AristoRod 13.16, a GMAW wire (SFA/AWS A5.28 ER80S-B2, EN ISO 21952-A: G Z CrMo1Si, EN ISO 21952-B: G 55 M13 1CM).

“ESAB filler metal experts and application engineers can work with customer teams to help select the optimum filler metals, develop optimum welding procedures and recommend a complete welding and weld monitoring/weld data management system,” adds Gustafsson.

### **Moisture Resistant Packaging**

ESAB’s new B2 SC SMAW electrodes come in VacPac vacuum-sealed packages, which weigh 1.5 to 3.8 kg (depending on the Ø) and feature a laminated, multi-layer aluminum foil that is hermetically-sealed around a strong plastic inner box. Upon opening, fresh and dry electrodes are guaranteed when the vacuum is confirmed. VacPac reduces or eliminates the need to scrap unused electrodes at the end of the day or re-bake them in a rod oven, and the packages are also much easier for operators to carry.

To ensure moisture protection for OK Flux 10.66 Flux, ESAB recommends its 25 kg BlockPac packaging so that flux can be used directly from the package without re-drying. Like VacPac, BlockPac features a laminated, multi-layer aluminium foil with a welded seal to protect the flux against moisture



re-absorption from the atmosphere, provide unlimited shelf life and guarantee fresh and dry flux when the bag is still in the block shape.

At ESAB, we exist to shape the future of welding and cutting. We connect fabricators with the widest range of products under our industry-leading brand portfolio with the latest technologies to solve virtually any industry challenge — then we back it up with our knowledge, experience and passion to help them be more productive than ever before. To learn more, visit [esab.com](http://esab.com).

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Image Information

JPG: B2 SC Family

Caption: ESAB's new B2 SC filler metals for SMAW, GTAW and SAW of creep resistant Grade P11 Cr-Mo alloys feature modernised formulations designed for applications that require high toughness values.