HA-495

EN ISO 14174: S A AR 1 88 AC

FEATURES:

- Active submerged arc welding flux
- Provides excellent bead wetting action
- Provides very good slag removal
- Performs well up to 1000 amps using both DC or variable balance square-wave AC currents

BENEFITS:

- Allows high speed welding, even over mill scale and light rust
- Offers a flat bead contour with good tie-in at weld toes
- Reduces clean-up time to help improve productivity
- Allows flexibility in selecting productive procedures and torch configurations (single, twin, tandem, etc.)

APPLICATIONS:

- Joining carbon steels up to 25 mm (1" thick)
- Thin-wall pressure vessels and tanks
- Railcar
- Single and two-pass groove welds
- Welding over mill scale and light rust
- Power transmission poles
- High-speed fillet welds
- Thin structural steel

FLUX TYPE: Agglomerated Aluminate-rutile

BASICITY INDEX: ~0.8 (Boniszewski)

ALLOY TRANSFER: Si and Mn Alloying
Typical AWS Wall Neutrality Number: 92 (Active)

DENSITY: ~1.25 kg/L

MESH SIZE: 0.2 - 1.6 mm/10 - 65 mesh

CURRENT: Direct Current Electrode Positive (DCEP), Direct Current Electrode Negative (DCEN), Alternating Current (AC)

STORAGE: Flux should be re-dried before use. Re-dried flux must be stored at 150±25°C (300±45°F) to prevent need for further re-drying

RE-DRYING: If the flux packaging has been opened and the flux has been exposed to moist conditions, re-drying is recommended. The flux should be re-dried at a temperature of 300-350°C (570-660°F) for a minimum of 2 hours. Re-drying should be made a maximum of three times.

RECYCLING: The flux recycling system must be free from moisture and oil. Slag and mill scale must be removed from the recycled flux. At least one part of new flux must be added to three parts of recycled flux.

TYPICAL FLUX COMPOSITION*:

$Al_2O_3 + TiO_2$	CaO + MgO + CaF	SiO_2	MnO + FeO
~60%	~20%	~5%	~15%

AWS CLASSIFICATIONS:

With Wire	Condition	Specifications	Classification (US Customary Units)	Classification (SI Units)
SDX S2Si-EM12K	As-Welded	A5.17/A5.17M	F7A2-EM12K	F48A3-EM12K
SubCOR EM13K-S MOD	As-Welded	A5.17/A5.17M	F7A2-EC1	F48A3-EC1
SubCOR 92-S	Two-Run As-Welded	A5.23/A5.23M	F8TA4-ECG	F55TA4-ECG

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Typical Weld Deposit Composition*:

With Wire	% C	% Mn	% Si	% P	% S	% Cu
SDX S2Si-EM12K	0.09	1.50	0.59	0.023	0.018	0.05
SubCOR EM13K-S MOD	0.07	1.63	0.74	0.028	0.010	0.06
SubCOR 92-S*	—	—	—	—	—	—

***Note:** Due to the high dilution of the two-run test assembly, weld metal chemical composition is not specified or reported.

Typical Mechanical Properties*:

With Wire	Condition	Tensile Strength	Yield Strength	Elongation % in 2” (50 mm)
SDX S2Si-EM12K	As-Welded	94 ksi (648 MPa)	84 ksi (579 MPa)	22%
SubCOR EM13K-S MOD	As-Welded	92 ksi (636 MPa)	83 ksi (574 MPa)	25%
SubCOR 92-S	Two-Run As-Welded	94 ksi (648 MPa)	71 ksi (490 MPa)	27%

Typical Charpy V-Notch Impact Values*:

With Wire	Condition	Avg. at 0°F (-20°C)	Avg. at -20°F (-30°C)	Avg. at -40°F (-40°C)
SDX S2Si-EM12K	As-Welded	30 ft-lbs (41 J)	30 ft-lbs (41 J)	—
SubCOR EM13K-S MOD	As-Welded	—	38 ft-lbs (52 J)	—
SubCOR 92-S	Two-Run As-Welded	—	—	—

Standard Packaging: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

50 lb. (23 kg) Bag
S669410-055

Conformances and Approvals:

With Wire	CWB
SDX S2Si-EM12K	F49A3-EM12K-H8
SubCOR 92-S	F55TA4-ECG-H8 F8TA4-ECG-H8

Limitations (diameter, position, etc.) may exist. Please refer to product approval certificates for more information.

Technical Questions? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@hobartbrothers.com

Caution:
Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, “Safety in Welding and Cutting,” published by the American Welding Society, 8669 NW 36th St., Miami, FL 33166 (can also be downloaded online at www.aws.org); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers LLC product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

Because Hobart Brothers LLC is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

Revision Date: 240205 (Replaces 230206)

HOBART FILLER METALS