

# SWX 150



EN ISO 14174: S A FB 1 55 AC H5

## FEATURES:

- Highly basic flux
- Highly neutral flux
- Highly neutral flux
- Supplied in moisture-proof packaging

## BENEFITS:

- Provides excellent weld toughness for demanding applications
- Provides uniform chemical and mechanical properties when welding thick sections
- Suitable for use with many low-alloy SAW wires
- Eliminates the need to re-dry unopened product

## APPLICATIONS:

- Single and multi-pass welding
- Pressure vessels
- Offshore structures
- Power generation
- Wind towers
- Oil & Gas

**FLUX TYPE:** Agglomerated fluoride-basic

**BASICITY INDEX:** 3.3 (Boniszewski)

**ALLOY TRANSFER:** None  
Typical AWS Wall Neutrality Number: 4 (Neutral)

**DENSITY:** ~1.1 kg/L

**MESH SIZE:** 0.2 - 2.0 mm/10 - 70 mesh

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

**STORAGE:** Product in undamaged packaging can be used without re-drying. Re-dried flux must be stored at 150±25°C (300±45°F) before use.

**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 <sub>2</sub> O <sub>3</sub> + MnO	CaO + MgO	SiO <sub>2</sub> + TiO <sub>2</sub>	CaF <sub>2</sub>
~20%	~35%	~15%	~25%

## AWS CLASSIFICATIONS:

With Wire	Condition	Specifications	Classification (US Customary Units)	Classification (SI Units)
SDX S2Si-EM12K	As-Welded	A5.17/A5.17M	F7A6-EM12K	F48A5-EM12K
	PWHT*	A5.17/A5.17M	F7P8-EM12K	F48P6-EM12K
SDX EM14K	As-Welded	A5.17/A5.17M	F7A8-EM14K	F48A6-EM14K
	PWHT*	A5.17/A5.17M	F7P8-EM14K	F48P6-EM14K
SubCOR EM13K-S MOD	As-Welded	A5.17/A5.17M	F7A8-EC1	F48A6-EC1
	PWHT*	A5.17/A5.17M	F7P8-EC1	F48P6-EC1
SubCOR N1-S	As-Welded	A5.23/A5.23M	F7A8-ECNi1-Ni1	F49A6-ECNi1-Ni1
	PWHT*	A5.23/A5.23M	F7P10-ECNi1-Ni1	F49P7-ECNi1-Ni1
SubCOR 92-S	As-Welded	A5.23/A5.23M	F8A10-ECM1-M1	F55A7-ECM1-M1
	PWHT*	A5.23/A5.23M	F8P8-ECM1-M1	F55P6-ECM1-M1
SubCOR 100F3-S	As-Welded	A5.23/A5.23M	F10A10-ECF3-F3	F69A7-ECF3-F3
	PWHT*	A5.23/A5.23M	F10P10-ECF3-F3	F69P7-ECF3-F3
SubCOR 120-S	As-Welded	A5.23/A5.23M	F11A10-ECM4-M4	F76A7-ECM4-M4
	As-Welded	A5.23/A5.23M	F11A8-ECF5-F5	F76A6-ECF5-F5
SubCOR SL 742	As-Welded	A5.23/A5.23M	F11A8-ECF5-F5	F76A6-ECF5-F5
	PWHT*	A5.23/A5.23M	F11P6-ECF5-F5	F76P5-ECF5-F5

\* Note: Stress-Relieved 1 Hr. @ 1150°F (620°C)

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.17, AWS A5.23, and EN ISO 14171 specifications. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers LLC.

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## EN ISO CLASSIFICATIONS:

With Wire	Condition	Specifications	Classification
SDX S2Si-EM12K	As-Welded	EN ISO 14171-A	S 38 5 FB S2Si
SubCOR SL 742	As-Welded	EN ISO 26304	S 69 6 FB T3 Ni2.5CrMo
	PWHT*	EN ISO 26304	S 69 6 FB T3 Ni2.5CrMo

**Note:** Stress-Relieved 1 Hr. @ 1050°F (565°C)

## TYPICAL MECHANICAL PROPERTIES\*:

With Wire	Condition	Tensile Strength	Yield Strength	Elongation % in 2" (50 mm)
SDX S2Si-EM12K	As-Welded	77 ksi (531 MPa)	68 ksi (469 MPa)	31%
	PWHT*	74 ksi (510 MPa)	61 ksi (421 MPa)	32%
SDX EM14K	As-Welded	87 ksi (600 MPa)	78 ksi (538 MPa)	27%
	PWHT*	84 ksi (579 MPa)	74 ksi (490 MPa)	27%
SubCOR EM13K-S MOD	As-Welded	81 ksi (558 MPa)	69 ksi (476 MPa)	28%
	PWHT*	78 ksi (538 MPa)	65 ksi (448 MPa)	32%
SubCOR N1-S	As-Welded	72 ksi (496 MPa)	62 ksi (427 MPa)	30%
	PWHT*	70 ksi (483 MPa)	57 ksi (393 MPa)	31%
SubCOR 92-S	As-Welded	92 ksi (634 MPa)	83 ksi (572 MPa)	25%
	PWHT*	90 ksi (621 MPa)	79 ksi (545 MPa)	28%
SubCOR 100F3-S	As-Welded	108 ksi (745 MPa)	100 ksi (689 MPa)	23%
	PWHT*	104 ksi (717 MPa)	96 ksi (662 MPa)	24%
SubCOR 120-S	As-Welded	113 ksi (779 MPa)	106 ksi (731 MPa)	20%
	PWHT*	104 ksi (717 MPa)	97 ksi (669 MPa)	22%
SubCOR SL 742	As-Welded	122 ksi (841 MPa)	112 ksi (772 MPa)	22%
	PWHT*	124 ksi (855 MPa)	110 ksi (758 MPa)	22%

\* **Note:** Stress-Relieved 1 Hr. @ 1150°F (620°C)

## TYPICAL CHARPY V-NOTCH IMPACT VALUES\*:

With Wire	Condition	Avg. at -40°F (-40°C)	Avg. at -60°F (-50°C)	Avg. at -80°F (-60°C)	Avg. at -100°F (-70°C)
SDX S2Si-EM12K	As-Welded	—	90 ft-lbs (122 J)	25 ft-lbs (34 J)	—
	PWHT*	—	55 ft-lbs (75 J)	55 ft-lbs (75 J)	—
SDX EM14K	As-Welded	—	92 ft-lbs (125 J)	87 ft-lbs (110 J)	—
	PWHT*	—	90 ft-lbs (122 J)	73 ft-lbs (99 J)	—
SubCOR EM13K-S MOD	As-Welded	—	—	50 ft-lbs (68 J)	95 ft-lbs (129 J)
	PWHT*	—	—	35 ft-lbs (47 J)	15 ft-lbs (20 J)
SubCOR N1-S	As-Welded	—	—	95 ft-lbs (129 J)	15 ft-lbs (20 J)
	PWHT*	—	—	125 ft-lbs (169 J)	155 ft-lbs (210 J)
SubCOR 92-S	As-Welded	—	—	90 ft-lbs (122 J)	80 ft-lbs (108 J)
	PWHT*	—	120 ft-lbs (163 J)	100 ft-lbs (136 J)	—
SubCOR 100F3-S	As-Welded	—	—	55 ft-lbs (75 J)	35 ft-lbs (47 J)
	PWHT*	—	—	55 ft-lbs (75 J)	25 ft-lbs (34 J)
SubCOR 120-S	As-Welded	—	55 ft-lbs (75 J)	60 ft-lbs (81 J)	45 ft-lbs (61 J)
	PWHT*	—	—	—	—
SubCOR SL 742	As-Welded	65 ft-lbs (88 J)	—	55 ft-lbs (75 J)	—
	PWHT**	55 ft-lbs (75 J)	—	—	25 ft-lbs (34 J)

\* **Note:** Stress-Relieved 1 Hr. @ 1150°F (620°C)

\*\* **Note:** Stress-Relieved 1 Hr. @ 1050°F (565°C)

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**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.

<b>50 lb. (23 kg)</b>
<b>Bag</b>
S669510-055

**CONFORMANCES AND APPROVALS\*:**

With Wire	ABS	BV	CE	CWB	DB	DNV-GL
SubCOR 92-S	4Y400M H10 3YT H10 (Single, Tandem)	—	—	—	—	V Y46M H10
SubCOR EM13K-S MOD	4TM H10	—	—	—	—	IV Y40M H10
SubCOR SL 742	5YQ690 H5	A 5Y69M H5	X	—	—	V Y69MS(H5)

\*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](mailto: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](http://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](http://www.hobartbrothers.com).

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

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