SWX 150

EN ISO 14174: S A FB 1 55 AC H5

FEATURES:	BENEFITS:
• Highly basic flux	• Provides excellent weld toughness for demanding applications
• Highly neutral flux	• Provides uniform chemical and mechanical properties when welding thick sections
• Highly neutral flux	• Suitable for use with many low-alloy SAW wires
• Supplied in moisture-proof packaging	• 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_2O_3 + MnO	CaO + MgO	SiO_2 + TiO_2	CaF_2
~20%	~35%	~15%	~25%

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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 EM13K	As-Welded	A5.17/A5.17M	F7A4-EM13K	F48A4-EM13K
	PWHT*	A5.17/A5.17M	F7P8-EM13K	F48P6-EM13K
SDX S3Si-EH12K	As-Welded	A5.17/A5.17M	F7A8-EH12K	F48A6-EH12K
	PWHT*	A5.17/A5.17M	F7P8-EH12K	F48P6-EH12K
SDX S3NiMo-EF3	As-Welded	A5.23/A5.23M	F10A8-EF3-F3	F69A6-EF3-F3
	PWHT*	A5.23/A5.23M	F10P8-EF3-F3	F69P6-EF3-F3
SubCOR EM12K-S	As-Welded	A5.17/A5.17M	F7A4-EC1	F48A4-EC1
SubCOR EM13K-S	As-Welded	A5.17/A5.17M	F7A8-EC1	F48A6-EC1
	PWHT*	A5.17/A5.17M	F6P8-EC1	F43P6-EC1
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
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)

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

EN ISO CLASSIFICATIONS:

With Wire	Condition	Specifications	Classification
SDX S2Si-EM12K	As-Welded	EN ISO 14171-A	S 38 5 FB S2Si
SDX S3Si-EH12K	As-Welded	EN ISO 14171-A	S 46 6 FB S3Si
SDX S3NiMo-EF3	As-Welded	EN ISO 14171-A	S 62 6 FB S3Ni1Mo
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
SubCOR SL 745	As-Welded	EN ISO 16304	S 89 4 FB T3Ni2.5Cr1Mo

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

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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 EM13K	As-Welded	74 ksi (510 MPa)	68 ksi (469 MPa)	27%
SDX S3Si-EH12K	As-Welded	83 ksi (572 MPa)	74 ksi (510 MPa)	31%
	PWHT*	80 ksi (552 MPa)	65 ksi (448 MPa)	31%
SDX S3NiMo-EF3	As-Welded	106 ksi (731 MPa)	92 ksi (634 MPa)	26%
	PWHT*	106 ksi (731 MPa)	86 ksi (593 MPa)	24%
SubCOR EM12K-S	As-Welded	71 ksi (490 MPa)	60 ksi (414 MPa)	32%
SubCOR EM13K-S	As-Welded	73 ksi (503 MPa)	64 ksi (441 MPa)	30%
	PWHT*	67 ksi (462 MPa)	52 ksi (359 MPa)	35%
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)	8%
SubCOR SL 742	As-Welded	122 ksi (841 MPa)	112 ksi (772 MPa)	22%
	PWHT*	124 ksi (855 MPa)	110 ksi (758 MPa)	22%
SubCOR SL 745	As-Welded	155 ksi (1069 MPa)	129 ksi (889 MPa)	17%
	PWHT*	154 ksi (1062 MPa)	131 ksi (903 MPa)	18%

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

**** Note:** Stress-Relieved 1 Hr. @ 1050°F (565°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 EM13K	As-Welded	—	42 ft-lbs (57 J)	28 ft-lbs (38 J)	—
	PWHT*	—	67 ft-lbs (91 J)	54 ft-lbs (73 J)	—
SDX S3Si-EH12K	As-Welded	—	—	140 ft-lbs (190 J)	120 ft-lbs (163 J)
	PWHT*	—	—	215 ft-lbs (291 J)	125 ft-lbs (169 J)

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

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TYPICAL CHARPY V-NOTCH IMPACT VALUES* CONTINUED:

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 S3NiMo-EF3	As-Welded	—	85 ft-lbs (115 J)	95 ft-lbs (129 J)	70 ft-lbs (95 J)
	PWHT*	—	65 ft-lbs (88 J)	45 ft-lbs (61 J)	—
SubCOR EM12K-S	As-Welded	95 ft-lbs (129 J)	20 ft-lbs (27 J)	—	—
SubCOR EM13K-S	As-Welded	—	—	160 ft-lbs (217 J)	35 ft-lbs (47 J)
	PWHT*	—	—	285 ft-lbs (386 J)	150 ft-lbs (203 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)
SubCOR SL 745	As-Welded	—	—	—	—

*** 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.

50 lb. (23 kg) Bag
150022300H

CONFORMANCES AND APPROVALS:

With Wire	ABS	BV	CE	CWB	DB	DNV-GL
(2X) SDX S3Si-EH12K	—	—	—	—	—	VI Y46MH5
SDX S3Si-EH12K	5YQ460M H5	—	—	F55A6-EH12K-G-H8 (F8A8-EH12K-G-H8)	—	V Y46(H5)
SubCOR 92-S	4Y400M H10 3YT H10 (Single, Tandem)	—	—	—	—	V Y46M H10
SubCOR EM13K-S	—	—	—	—	—	IV Y40M 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

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: 190909 (Replaces 190118)