

## SubCOR™ SL 840 HC

Page: 1/3

Type no: 508

### Features

- Maintains good mechanical properties in the as-welded, post-weld stress-relieved, and post-weld normalized conditions
- Specially formulated to provide very good weld metal toughness and ductility
- Seamless wire design virtually eliminates moisture absorption and produces low hydrogen weld deposits
- Unique manufacturing process provides unmatched product consistency
- Composite (cored) wires offer broader penetration profiles compared to solid wire at comparable welding parameters

### Benefits

- Offers versatility in suitable application, but is particularly useful when residual stress caused by welding must be minimized or eliminated
- Helps to minimize risk of cracking in demanding service conditions
- Assists in maintaining a low hydrogen process to minimize the risk of hydrogen-induced cracking
- Provides excellent uniformity of chemical properties, mechanical properties, and arc characteristics
- Helps to prevent burn-through when welding at high currents on root passes and relatively thin materials

### Applications

- Pressure vessel fabrication
- Offshore fabrication
- Pipeline double jointing
- Heavy equipment

### Common Base Metal Types, Specifications & Grades

Types Non-alloyed, carbon steels, fine grain structural steels 490-550 MPa (70-80 ksi) tensile strength

ASTM A516, A255, A333, A350, A612, A707

EN As-welded and stress-relieved condition: S315 (NL ½) - S460(NL ½).  
Normalized and annealed condition: S315 (NL ½) - S355(NL ½).

For reference only. Not inclusive of all compatible applications or base metals. **Always** consider all design requirements when selecting an electrode/flux combination.

### Wire Characteristics

Wire type Seamless composite (cored) submerged arc welding wire

Recommended flux SWX 140

Type of current DC+/AC

Standard diameters 2.4 mm (3/32"), 4.0 mm (5/32")

Re-drying Not recommended

Storage Product should be stored in a dry, enclosed environment and in its original intact packaging

### Wire/Flux - Combination Classifications

With flux	EN ISO 14171-A
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SWX 140	AW S 46 6 FB T3Ni1
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	SR S 46 6 FB T3Ni1
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AW: as welded, all weld metal. SR: stress relieved, all weld metal, 620±15 °C (1150±25 °F)/1h.

### Chemical Composition All Weld Metal - Typical Values

With flux	%C	%Si	%Mn	%P	%S	%Ni
SWX 140	0.10	0.30	1.40	0.015	0.015	0.90

## SubCOR™ SL 840 HC

Page: 2/3

Type no: 508

### Mechanical Properties - Typical values

With flux		Re/Rp0.2 MPa	Rm Mpa	A %	CVN J		
-20°C -40°C -60°C							
SWX 140	AW	520	570	30	140	120	100
	SR	520	570	30	140	120	
	N	>355	480-560	26	100	100	
	N&A	>355	480-560	25	120	100	

AW: as welded, all weld metal. SR: stress relieved, all weld metal, 620±15°C (1150±25°F)/1h. N: Normalized. N&A: Normalized & Annealed.

### Mechanical Properties - Typical values

With flux		YS ksi	TS ksi	E %	CVN ft-lbf		
-4°F -40°F -76°F							
SWX 140	AW	75	83	30	103	89	74
	SR	75	83	30	103	89	
	N	>51	70-81	26	74	74	
	N&A	>51	70-81	25	89	74	

AW: as welded, all weld metal. SR: stress relieved, all weld metal, 1150±25°F (620±15°C)/1h. N: Normalized. N&A: Normalized & Annealed.

### Recommended Fluxes - Standard Packaging and Item numbers

Package	SWX 140
25 kg (55 lbs) EAE Bag	140022500H

### Standard Diameters, Packages and Item numbers - North America

Package	2.4 mm (3/32")	4.0 mm (5/32")
25 kg (55 lbs) Wire basket K-415	508241025H	508401025H

#### Customers Located In North America:

Refer to the table above for standard part numbers exclusive to North America.

For a complete list of diameters and packaging, please contact Hobart Brothers at +1 (800) 424-1543 for US customer service or e-mail [subarc@itw-welding.com](mailto:subarc@itw-welding.com)

### Standard Diameters, Packages and Item numbers - Outside North America

Package	2.4 mm (3/32")	4.0 mm (5/32")
25 kg (55 lbs) Wire basket K-415	5082410250	5084010250

#### Customers Located Outside North America:

Refer to the table above for standard part numbers exclusive to locations outside North America.

For a complete list of diameters and packaging, please contact the ITW Welding GmbH sales office at +49 (0) 6356 966 119 or e-mail [subarc@itw-welding.com](mailto:subarc@itw-welding.com)

### Approvals

With flux	ABS	BV	DNV	GL	LR	CE	DB	TÜV
SWX 140			VYM	6YM		√		√

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



## SubCOR™ SL 840 HC

Page: 3/3

Type no: 508

**Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**

**TECHNICAL QUESTIONS?** For technical support of Hobart Filler Metals products please visit [www.hobartbrothers.com/where-to-buy](http://www.hobartbrothers.com/where-to-buy) to find your closest Hobart representative or send an e-mail to [subarc@itw-welding.com](mailto:subarc@itw-welding.com) for further assistance.

**DISCLAIMER:**

The information contained or otherwise referenced herein is for reference purposes only and is presented only as "typical." Typical data are those obtained when welding and testing are performed in accordance with applicable AWS and/or EN ISO specification(s). Other tests and procedures may produce difference results and typical data should not be assumed to yield similar results in a particular application or weldment. No data is to be constructed as a recommendation for any welding condition or technique not controlled by ITW Welding. ITW Welding does not assume responsibility for any results obtained by persons over whose methods it has no control. It is the user's responsibility to determine the suitability of any products or methods mentioned herein for a particular purpose. In light of the foregoing, ITW Welding specifically disclaims any liability incurred from reliance on such information, and disclaims all guarantees and warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, and further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

**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 36 St, # 130, Miami, FL 33166-6672 (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 Company product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

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

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