

Welding Consumables for CORSPACE™ Bridge Applications

CORSPACE : Corrosion Resisting Steel for Repaint Term Extension

Bridges are typically designed for a service life of approximately 100 years, making proper maintenance essential. One of the most critical maintenance activities is preventing corrosion at coating-deteriorated areas, which generally requires periodic repainting. CORSPACE, developed by Nippon Steel Corporation, contains a small amount of tin (Sn) that significantly suppresses corrosion. Compared with conventional steel, CORSPACE can extend the repainting interval by approximately two times, resulting in substantial reductions in maintenance costs. In addition, it helps reduce environmental impact by contributing to the reduction of volatile organic compound (VOC) emissions.



Kesennuma Bay Crossing Bridge

Features

- Corrosion resistance at coating-deficient areas
- Excellent performance in severe salt environments
- Suitable for deicing salt exposure

CORSPACE Product Lineup ¹⁾

Symbol of Type	Applied Plate thickness mm	Chemical Component / Mechanical Property
SS400 - CORSPACE	6 - 100	In compliance with JIS G 3101 SS400
SM400 - CORSPACE	6 - 100	In compliance with JIS G 3106 SM400
SM490 - CORSPACE	6 - 100	In compliance with JIS G 3106 SM490
SM490Y - CORSPACE	6 - 100	In compliance with JIS G 3106 SM490Y
SM520 - CORSPACE	6 - 100	In compliance with JIS G 3106 SM520
SM570 - CORSPACE	6 - 100	In compliance with JIS G 3106 SM570
SBHS400 - CORSPACE	6 - 100	In compliance with JIS G 3140 SBHS400
SBHS500 - CORSPACE	6 - 100	In compliance with JIS G 3140 SBHS500

CORSPACE is a trademark or registered trademark of NIPPON STEEL CORPORATION.

1) CORSPACE: Corrosion Resisting Steel For Repaint Term Extension Product Catalog, Nippon Steel Corporation, 2019, 2026.

Welding Consumables for CORSPACE™

Steel Grade	Welding Process	Welding Position	Brand Name	Tensile test		Impact test		JIS Specification
				YS MPa	TS MPa	Temp. °C	vE (J)	
SS400 - CORSPACE SM400 - CORSPACE SM490 - CORSPACE SM490Y - CORSPACE SBHS400 - CORSPACE	SMAW	All-positions	L-55 • PX	503	607	-30	145	Z3211 E4916-U
	GMAW	Flat, Fillet	YM-26 • PX	483	571	0	133	Z3312 YGW11
	FCAW	All-positions	SF-1 • PX	539	612	0	136	Z3313 T49J0T1-1CA-UH5
		Fillet Welding	SM-1F • PX	510	597	0	64	Z3313 T49J0T1-1CA-UH5
	SAW	Flat	YF-15 × Y-D • PX	511	601	0	93	Z3183 S50J2-H
		Fillet Welding	NF-800R × Y-D • PX	438	544	0	77	Z3183 S502-H
			YF-800 × Y-D • PX	415	534	0	49	Z3183 S501-H
SM520 - CORSPACE	GMAW	Flat, Fillet	YM-55C • PX	451	606	0	140	Z3312 YGW18
	SAW	All-positions	YF-15B × Y-DM3 • PX	553	648	0	108	Z3183 S532-H
		Fillet Welding	NF-820 × Y-D • PX	478	588	0	81	Z3183 S532-H
SM570 - CORSPACE SBHS500 - CORSPACE	SMAW	All-positions	L-60 • PX	612	700	-20	126	Z3211 E57J16-N1M1U
	GMAW	Flat, Fillet	YM-60C • PX	554	629	-5	127	Z3312 G57JA1UC3M1T
	FCAW	All-positions	SF-60 • PX	595	665	-5	78	Z3313 T57J1T1-1CA-N1-UH5
		Fillet Welding	SM-60F • PX	567	642	-5	81	Z3313 T57J1T1-0CA-G-UH5
	SAW	All-positions	YF-15B × Y-DM3 • PX	595	699	-20	67	Z3183 S624-H4
		Fillet Welding	NF-820 × Y-DM • PX	564	662	-5	70	Z3183 S582-H

CORSPACE is a trademark or registered trademark of NIPPON STEEL CORPORATION.

WELDREAM is a trademark or registered trademark of NIPPON STEEL WELDING & ENGINEERING CO., LTD.



Warning!

Fumes and gas may be hazardous to your health. Please take appropriate preventive measures such as the implementation of ventilation as well as wearing a protector for breathing. Arc light is harmful to the eyes and skin. Please use appropriate shielding measures. Please do not touch anything where electricity is activated. It may cause death.

Request to Customers

- 1 Various data of distinctive features such as welding consumables, all-weld metal, weld metal, etc. shown in this catalog are provided for general information only and represent typical values. They do not constitute any representation or guarantee of performance, quality, or suitability for any specific application unless expressly agreed as specifications.
- 2 The properties and performance of welded structures, which cannot be determined by welding consumables alone, may vary depending on various factors such as structural design, chemical composition of base materials, fabrication method, welding conditions, environment, and operator skill. Users are solely responsible for evaluating and determining the suitability of the products for their intended applications, and appropriate verification and testing are recommended prior to use.
- 3 All information provided herein is based on available data at the time of publication and is subject to change without notice. We shall not be liable for any direct or indirect damages arising from the use of or any reliance upon the technical information contained in this catalog.

NIPPON STEEL WELDING & ENGINEERING CO., LTD.

<https://www.weld.nipponsteel.com>

© 2026 NIPPON STEEL WELDING & ENGINEERING CO., LTD.

2609 (Y)