

CorroPlast®

Technical Datasheet

Chemistry

Typical	C	Mn	S	Cr	Additions
Analysis %	0.05	1.30	0.15	12.50	+

Description

CorroPlast® is a pre-hardened, free-machining 400 series stainless steel, specifically developed for mold bases for processing plastic. CorroPlast® is supplied in a pre-hardened condition with a hardness of approximately 302-340 HB (32-36 HRC).

Characteristics

Excellent machinability
 Excellent dimensional stability
 Good resistance to corrosion (e.g. PVC)
 Good thermal conductivity
 Good weldability

Applications

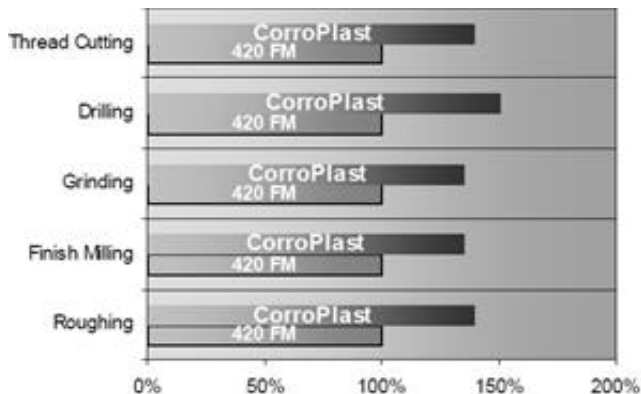
Mold bases for processing corrosive plastics
 Mold inserts for processing corrosive plastics with standard requirements for polishability

Heat Treatment

No further heat treatment is required

Machineability

420FM and CorroPlast® in % (325 HB)



Mechanical Properties

Hardness HRC	Y.S (0.2%) Ksi	T.S. Ksi	EL (%)
34	129	160	13

Physical Properties (32-36 HRC)

Density: 0.278 lbs/in³ (room temperature)

Coefficient of Thermal Expansion	70°F-200°F 5.6 X 10 ⁻⁶ /°F	70°F-400°F 5.9 X 10 ⁻⁶ /°F	70°F-750°F 6.3 X 10 ⁻⁶ /°F
Thermal Conductivity	70°F 151 Btu/in/ft ² /hr/°F	300°F 156 Btu/in/ft ² /hr/°F	650°F 165 Btu/in/ft ² /hr/°F

Welding

CorroPlast® is readily weldable without pre or post heating. CorroPlast® does not develop an over-hardened heat affected zone (HAZ). This minimizes the risk of weld-induced cracking during repairs.

For best results, special CorroPlast® welding electrodes are available. CorroPlast® electrodes provide the optimal chemical and mechanical properties.

Alternatively, processes such as GMAW and SMAW may be employed, using several standard stainless fillers. However, welding dissimilar materials may cause a galvanic reaction, which could lead to localized corrosion. This can be attributed to a chemical mismatch between the filler metals and the base steel. Please contact your Swiss Steel International heat treatment facility for recommendations.

Polishing

CorroPlast® is primarily used as a holder material for plastic molds. It is not intended for tools which require a high surface finish. A Swiss Steel International representative should be consulted for additional information.

General Note

All statements regarding the properties or utilization of the materials or products mentioned are for the purpose of description only. Guarantees regarding the existence of certain properties or a certain utilization are only valid if agreed upon in writing.



NORTH AMERICAN DISTRIBUTION

HEADQUARTERS + TECHNICAL SUPPORT

SWISS STEEL USA, INC.
365 Village Dr.
Carol Stream, IL 60188
Phone: 800.323.1233
Fax: 630.879.0498

MANUFACTURING + CENTRAL STOCKING FACILITY

SWISS STEEL USA, INC.
1609 E. Wilson Street
Batavia, IL 60510

DISTRIBUTION LOCATIONS

WEST COAST

556 Vanguard Way
Brea, CA 92861

MIDWEST

365 Village Dr.
Carol Stream, IL 60188

1455 Miller Pkwy.
Streetsboro, OH 44241

SOUTHEAST

119 Old Airport Rd.
Roebuck, SC 29376

NORTHEAST

370 Franklin Turnpike
Mahwah, NJ 07430

CANADA

SWISS STEEL CANADA, INC.
6350 Vipond Dr.
Mississauga, ONT L5T 1G2

www.swisssteel-international.us
www.swisssteel-international.ca