SOLON SOLbond Black / Blue · **EN**

SOLON SOLbond Integra.

The Innovative Solar Rooftop System.

- Rooftop solution, including a module and a roof manufactured from the high performing Colorcoat Prisma® pre-finished steel by Tata Steel
- Minimum static rooftop load – module weight less than 10 kg/m²
- Fast and simple installation of modules through adhesive sealing
- Assembly without roof penetration
- High-grade silicone adhesive with outstanding weather- and UV-resistance
- High power density: up to 155 Wp/m²

TATA STEEL

SOLON

The Intelligent Combination for High Output.

The SOLON SOLbond Integra PV steel rooftop solution combines the strength and durability of trapezoidal profiled Colorcoat Prisma® by Tata Steel with the powerful, frameless SOLON modules. The components are combined to form a powerful system using silicone adhesive – with up to 25 years warranty for maximum investment security.

More Watts per Square Meter.

- High power density: up to 155 Wp/m²
- No shading caused by mounting systems

Bonding to the Rooftop.

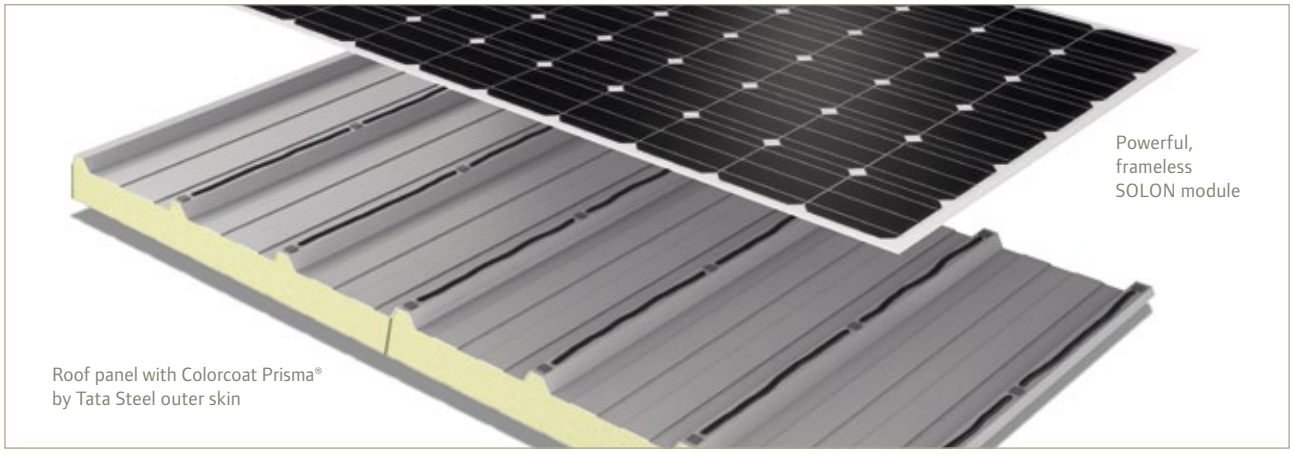
- Low system weight – less than 10 kg/m²
- No roof penetration
- No substructure required
- Simple and fast installation by adhesion
- No corrosion with other materials

Long-Lasting System Stability.

- Comprehensive warranties for all system components
- Suitable for installation on Colorcoat Prisma® roofs under 3 years old

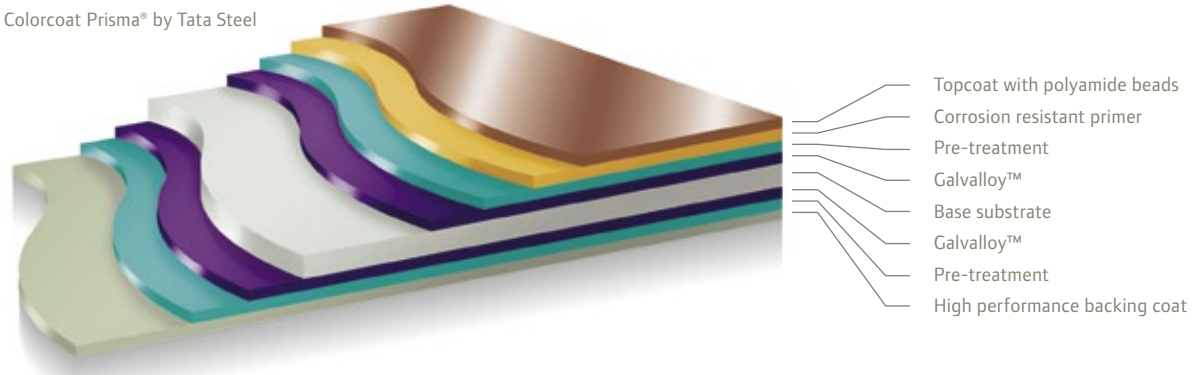
High System Security.

- TÜV-certified system
- Module approved according to DIN 1055-4 and DIN EN 1991-1-4/NA (wind)
- Module approved according to DIN 1055-5 and DIN EN 1991-1-3/NA (snow)



Quality for Enduring Permanence: Unique Warranties for the Solar Rooftop System.

As premium manufacturers SOLON and Tata Steel offer a comprehensive warranty of up to 25 years for the solar rooftop system. This gives your investment its principal characteristic: Security.



Colorcoat Prisma® is made up of a number of layers which perform different functions. The Galvalloy™ metallic coating and high build primer provide the corrosion resistance, and the topcoat, utilises the latest polymer technology to provide abrasion and UV resistance.

Two Small Steps for Setup.
One Giant Leap for Lasting Returns.

1. **Mounting of the Roof.**
2. **Mounting of the Module.**
   Cleaning of the roof, application of the adhesive beads, placing of the module

SOLON Advantages:

- 10-year product guarantee [1)]
- Up to 25 years warranty on adhesive bonding [2)]
- 5-stage performance guarantee over 25 years [1)]
- Includes SOLON solar insurance [3)]
- Positive sorting of power classes (0 to + 4.99 Wp)
- Free module recycling

[1)] According to SOLON Product and Performance Guarantee.
[2)] According to SOLON SOLbond Integra Terms and Conditions of Warranty and Guarantee. Valid for roofs approved by SOLON.
[3)] Valid for the countries of the European Union and Switzerland.

Colorcoat Prisma® by Tata Steel – Advantages:

- Up to 25 years guarantee on the function and durability of the weatherside of the pre-finished steel roof in Northern Europe [4)]
- Optimum combination of corrosion resistance, UV resistance and temperature stability
- SOLbond and Colorcoat Prisma® are perfectly suited to the Sika bonding system
- Colorcoat Prisma® colours surpass requirements of Ruv4 and RC5 certification as per EN 10169:2009

[4)] Restrictions in extreme locations and only applicable in Europe; guarantee details are available from the roof cladding manufacturer concerned.

SOLON SOLbond

High-performance system components.

SOLON Black 280/12

(monocrystalline)

Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m², (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3

Capacity rating	P_{max}	310 Wp [1]	305 Wp [1]	300 Wp	295 Wp	290 Wp	285 Wp	280 Wp
Module efficiency		15.66 %	15.40 %	15.15 %	14.90 %	14.65 %	14.55 %	14.29 %
Rated voltage	V_{mpp}	36.43 V	36.22 V	36.00 V	35.80 V	35.60 V	35.40 V	35.20 V
Rated current	I_{mpp}	8.55 A	8.45 A	8.36 A	8.26 A	8.16 A	8.06 A	7.96 A
Open circuit voltage	V_{OC}	45.24 V	44.98 V	44.77 V	44.50 V	44.23 V	43.96 V	43.69 V
Short circuit current	I_{SC}	8.86 A	8.79 A	8.74 A	8.66 A	8.59 A	8.51 A	8.44 A
Maximum reverse current	I_R	20 A	20 A	20 A	20 A	20 A	20 A	20 A
Maximum system voltage		1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V

Measuring tolerance for P_{max}: ± 3 %

Reduction of module efficiency from 1,000 W/m² to 200 W/m²: < 4 %

Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m², NOCT, AM 1.5

Capacity rating	P_{max}	222 Wp	219 Wp	215 Wp	212 Wp	208 Wp	204 Wp	201 Wp
Rated voltage	V_{mpp}	32.65 V	32.47 V	32.27 V	32.09 V	31.91 V	31.73 V	31.55 V
Rated current	I_{mpp}	6.81 A	6.74 A	6.67 A	6.59 A	6.52 A	6.44 A	6.36 A
Open circuit voltage	V_{OC}	40.89 V	40.65 V	40.46 V	40.22 V	39.98 V	39.73 V	39.49 V
Short circuit current	I_{SC}	7.15 A	7.10 A	7.06 A	6.99 A	6.94 A	6.87 A	6.81 A

Thermal data

Tc of open circuit voltage	– 0.33 %/K
Tc of short circuit current	0.04 %/K
Tc of power	– 0.43 %/K
NOCT (according to IEC 61215)	48 °C ± 2 °C

Measuring tolerance for all final data: ± 10 % (except P_{max} (STC) and NOCT)

SOLON Blue 270/12

(polycrystalline)

Electrical data – typical (STC)

STC (Standard Test Conditions): 1.000 W/m², (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3

Capacity rating	P_{max}	300 Wp [1]	295 Wp	290 Wp	285 Wp	280 Wp	275 Wp	270 Wp	265 Wp
Module efficiency		15.15 %	14.90 %	14.65 %	14.39 %	14.29 %	14.04 %	13.78 %	13.53 %
Rated voltage	V_{mpp}	37.03 V	36.77 V	36.50 V	36.25 V	35.95 V	35.70 V	35.45 V	35.18 V
Rated current	I_{mpp}	8.12 A	8.04 A	7.95 A	7.86 A	7.78 A	7.70 A	7.61 A	7.53 A
Open circuit voltage	V_{OC}	44.98 V	44.76 V	44.53 V	44.30 V	44.08 V	43.85 V	43.62 V	43.40 V
Short circuit current	I_{SC}	8.46 A	8.39 A	8.33 A	8.27 A	8.20 A	8.14 A	8.08 A	8.02 A
Maximum reverse current	I_R	20 A	20 A	20 A	20 A	20 A	20 A	20 A	20 A
Maximum system voltage		1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V

Measuring tolerance for P_{max}: ± 3 %

Reduction of module efficiency from 1.000 W/m² to 200 W/m² : < 5 %

Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m², NOCT, AM 1.5

Capacity rating	P_{max}	218 Wp	215 Wp	211 Wp	207 Wp	204 Wp	200 Wp	197 Wp	193 Wp
Rated voltage	V_{mpp}	33,70 V	33,46 V	33,22 V	32,99 V	32,72 V	32,49 V	32,26 V	32,01 V
Rated current	I_{mpp}	6,48 A	6,42 A	6,36 A	6,29 A	6,23 A	6,16 A	6,09 A	6,03 A
Open circuit voltage	V_{OC}	41,07 V	40,87 V	40,66 V	40,45 V	40,25 V	40,04 V	39,83 V	39,63 V
Short circuit current	I_{SC}	6,87 A	6,81 A	6,76 A	6,71 A	6,66 A	6,61 A	6,56 A	6,51 A

Thermal data

Tc of open circuit voltage	– 0.32 %/K
Tc of short circuit current	0.05 %/K
Tc of power	– 0.41 %/K
NOCT (according to IEC 61215)	46 °C ± 2 °C

Measuring tolerance for all final data: ± 10 % (except P_{max} (STC) and NOCT)

[1] *Available in limited amounts upon request.*

SOLON SOLbond Integra

SOLON Black 280/12 and SOLON Blue 270/12.

Mechanical specifications module

Dimensions (H x W x D)	1,973 x 993 x 4.5 mm
Weight	19.5 kg
Junction box	1 box with 3 bypass diodes
Cable	Solar cable, length 1,000 mm, 4 mm², prefabricated with MC4-combinable plug
Application class	Class A at IEC 61730
Front glass	Transparent toughened safety glass, 3.2 mm
Solar cells	72 cells, mono- or polycrystalline Si 6.2″ (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Composite film

Permissible operating conditions

Temperature range	−40°C to +85°C
Maximum surface load capacity	Tested up to 2,400 Pa according to IEC 61215
Resistance against hail	Maximum diameter of 25 mm with impact speed of 83 km/h

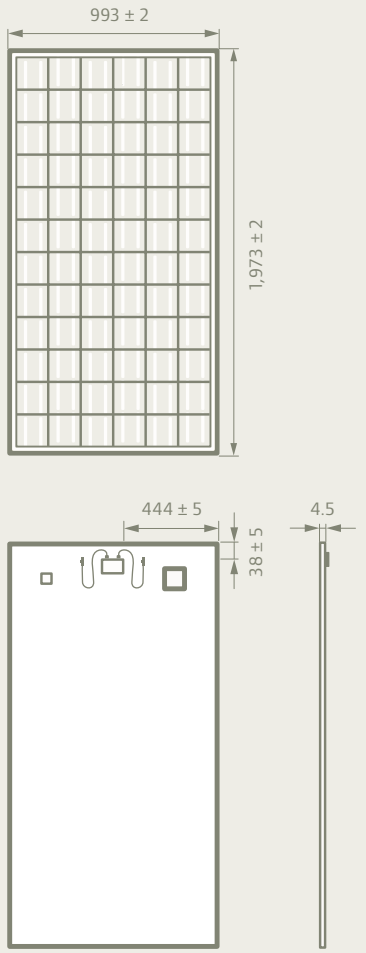
Guarantees and certifications

Product guarantee	10 years [2)]
Performance guarantee	Guaranteed output of 95 % for 5 years, 90 % for 10 years, 87 % for 15 years, 83 % for 20 years and 80 % for 25 years [2)]
Approvals and certificates	IEC 61215 Edition II, DIN EN 61730 (incl. Safety Class II), IEC 62716 (Ammonia resistance), IEC 68-2-52 (Salt mist resistance), MCS

Sikasil® SG-20

Container size	600 ml
Chemical basis	1-component silicone, moisture-curing
Cross-link type	Neutral
Working temperature	+5°C to +40°C
Use	−40°C to +150°C
Hardening time	6 days (at 23° C and 50 % air humidity)
Approvals and certificates	Fulfils requirements of EOTA ETAG 002, EN 13022, ASTM C 1184
Warranty	Up to 25 years warranty on adhesive bonding [3)]

Drawing



Dimensions in mm

This datasheet complies with the requirements of EN 50380:2003. Subject to modifications and omissions.
Electrical data without guarantee.

[2)] According to SOLON Product and Performance Guarantee.
[3)] According to SOLON SOLbond Integra Terms and Conditions of Warranty and Guarantee. Valid for roofs approved by SOLON.

CEC Approved

- Qualified, IEC 61215
- Safety tested, IEC 61730
- Ammonia resistance tested
- Periodic Inspection

APPROVED PRODUCT

SOLON Energy GmbH
Am Studio 16
12489 Berlin · Germany

Phone +49 30 81879-0
Fax +49 30 81879-9999
E-Mail components@solon.com

For more information on SOLON products please visit **www.solon.com**