### **TECHNICAL PRODUCT DATA SHEET**

# solidian.

## solidian GRID Q27-CCE-68 (F01R02)

Symmetrical, bidirectional reinforcement grid (type Q) made of media-resistant carbon fiber reinforced polymer (CFRP) for the reinforcement of concrete components



Standard

### Material

Fiber material	C (Carbon)	
Impregnation agent	E (Epoxy resin)	
Color	black	
Surface finish	smooth	
Chemical resistance of the reinforcement in relation to the exposure classes in accordance with EN 206-1	XD3	Chlorides, except seawater
	XS3	Chlorides from seawater
	XA3	Chemical attack

Unit

[°]

Value

0

90

Geo	Geometry and structure			
	Directions of the fiber strends	longitudinal		
	Directions of the fiber strands	transversal		
	Management of files, strand width	longitudinal		
Φh	Mean value of fiber strand width			

		transversal		90	
φ <sub>h</sub> φ <sub>v</sub>	Mean value of fiber strand width   -     Mean value of fiber strand height   -     Nominal diameter   -     Nominal cross-sectional area per fiber strand   -	longitudinal	[]	5,3	
		transversal	— [mm] —	3,9	-
		longitudinal	[]	1,4	
		transversal	— [mm] —	1,9	_
		longitudinal	_ [mm] _	2,37	
nm		transversal	— [mm] —	2,37	_
		longitudinal	[	4,4	10 10 400 1
Anm		transversal	— [mm²] —	4,4	ISO 10406-1
		longitudinal	[no.no2/no]	65	
nm	Nominal cross-sectional area per meter	transversal	— [mm²/m] —	65	_
	Fiber cross sectional grap par fiber strand	longitudinal	[no.no2]	1,81	
\f,nm	nm Fiber cross-sectional area per fiber strand	transversal	— [mm²] —	1,81	_
	Fiber cross sectional grap per motor	longitudinal	[no.no2/no]	27	
f,nm	Fiber cross-sectional area per meter	transversal	— [mm²/m] —	27	_
s Grid width		longitudinal	[]	68	
Grid width	transversal	— [mm] —	68		
SI	Clear distance of the file or stress de	longitudinal	_ [mm] _	64,1	
Clear distance of the fiber strands	transversal	— [mm] —	62,9	_	
G	Grid height (average value of the maximum height)		[mm]	2,9	-
	Weight per unit area of the non-metallic reinforceme	ent	[g/m²]	183	-
ü	Degree of coverage of the grid		[%]	13,0	
min	Minimum permissible radius of curvature		[mm]	350	_

### **TECHNICAL PRODUCT DATA SHEET**

# solidian.

Recommended operating temperature range   [°C]   -20 to +80   -     Building material class components <sup>10</sup> [-]   A2, non-combustible   DIN 4102-1     Building material class reinforcement grid   [-]   A2, non-combustible   DIN 4102-1     Mechanical properties   Unit   Value   Standard     Imm.   Characteristic short-term tensile strength related to the nominal cross-sectional area   longitudinal transversal   [MPa]   1150   ISO 10406-1     Young's modulus related to the nominal cross- section   Longitudinal transversal   [MPa]   94000   ISO 10406-1     from.   Mean short-time tensile strength related to the fiber cross-sectional area   Longitudinal transversal   [MPa]   23880   ISO 10406-1     from.   Characteristic short-term tensile strength related to the fiber cross-sectional area   Longitudinal transversal   [MPa]   2 23000   ISO 10406-1     Etamom   Characteristic clongation at failure under tensile to add of the non-metallic reinforcement   Longitudinal transversal   [MPa]   2 235000   ISO 10406-1     From.k   Characteristic tensile force transmission of the non- metallic reinforcement per m width   Longitudinal transversal   [MPa]   2 12.2   ISO 10406-1	Mate	erial properties		Unit	Value	Standard
T_go   Glass transition temperature (DMA)   [°C]   ≥ 110   DIN 65583     Recommended operating temperature range   [°C]   -20 to +80   -     Building material class components <sup>10</sup> [-]   A2, non-combustible   DIN 4102-1     Building material class reinforcement grid   [-]   A2, non-combustible   DIN 4102-1     Mechanical properties   Unit   Value   Standard     formak   Characteristic short-term tensile strength related to the nominal cross-sectional area   Iongitudinal transversal   IIIS0   ISO 10406-1     formak   Wean short-time tensile strength related to the fiber cross-sectional area   Iongitudinal transversal   (MPa)   94000   ISO 10406-1     formak   Characteristic short-term tensile strength related to the fiber cross-sectional area   Iongitudinal transversal   (MPa)   23880   ISO 10406-1     formak   Characteristic short-term tensile strength related to the fiber cross-sectional area   Iongitudinal transversal   (MPa)   225000   ISO 10406-1     formak   Characteristic elongation at failure under tensile   Iongitudinal transversal   (MPa)   225000   ISO 10406-1     formak   Characteristic tensile force transmission of the non-metallic reinforcement <td>ρ</td> <td>Bulk density of the fiber composite material</td> <td></td> <td>[g/cm<sup>3</sup>]</td> <td>1,30</td> <td>ISO 1183-1</td>	ρ	Bulk density of the fiber composite material		[g/cm <sup>3</sup> ]	1,30	ISO 1183-1
Recommended operating temperature range   [°C]   -20 to +80   -     Building material class components <sup>10</sup> [-]   A2, non-combustible   DIN 4102-1     Building material class reinforcement grid   [-]   A2, non-combustible   DIN 4102-1     Mechanical properties   Unit   Value   Standard     Imm.   Characteristic short-term tensile strength related to the nominal cross-sectional area   Inogitudinal   INPa]   1150   ISO 10406-1     Young's modulus related to the nominal cross-   congitudinal   [MPa]   94000   ISO 10406-1     transversal   Insertion   [MPa]   94000   ISO 10406-1     transversal   [MPa]   94000   ISO 10406-1     transversal   [MPa]   23880   ISO 10406-1     transversal   [MPa]   23900   ISO 10406-1     transversal   [MPa]   23900   ISO 10406-1     transversal   [MPa]   23900   ISO 10406-1     transversal   [MPa]   235000   ISO 10406-1     transversal   [MPa]   235000   ISO 10406-1     transversal   [MPa]   235000   ISO 10406-1 <td>α</td> <td>Coefficient of thermal expansion</td> <td>along the fiber</td> <td>[10<sup>-6</sup> 1/K]</td> <td>0,5</td> <td>-</td>	α	Coefficient of thermal expansion	along the fiber	[10 <sup>-6</sup> 1/K]	0,5	-
Building material class components $^{10}$ [-]   A2, non-combustible   DIN 4102-1     Building material class reinforcement grid   [-]   E, normally flammable   EN 13501-1     Mechanical properties   Unit   Value   Standard     Characteristic short-term tensile strength related to the nominal cross-sectional area   longitudinal transversal   [MPa]   1150   ISO 10406-1     Emm   Young's modulus related to the nominal cross-sectional area   longitudinal transversal   [MPa]   94000   ISO 10406-1     Mean short-time tensile strength related to the fiber section   longitudinal transversal   [MPa]   23880   ISO 10406-1     Funn.   Characteristic short-term tensile strength related to the fiber cross-sectional area   longitudinal transversal   [MPa]   23900   ISO 10406-1     Funn.   Characteristic short-term tensile strength   longitudinal transversal   [MPa]   235000   ISO 10406-1     Etomo   Characteristic short-term tensile strength   longitudinal transversal   [MPa]   235000   ISO 10406-1     Etomo   Characteristic short-term tensile strength   longitudinal transversal   [MPa]   225000   ISO 10406-1     Etomat   Characteristic short-term	T <sub>g0</sub>	Glass transition temperature (DMA)		[°C]	≥ 110	DIN 65583
Building material class reinforcement grid   [-]   E, normally flammable   EN 13501-1     Mechanical properties   Unit   Value   Standard     Genacteristic short-term tensile strength related to the nominal cross-sectional area   Ingitudinal transversal   [MPa]   1150   ISO 10406-1     Emm   Young's modulus related to the nominal cross-sectional area   Iongitudinal transversal   [MPa]   94000   ISO 10406-1     Emm   Mean short-time tensile strength related to the fiber cross-sectional area   Iongitudinal transversal   [MPa]   2 3880   ISO 10406-1     frame   Mean short-time tensile strength   Iongitudinal transversal   [MPa]   2 3880   ISO 10406-1     frame   Iber cross-sectional area   Iongitudinal transversal   [MPa]   2 3800   ISO 10406-1     Kenne   Characteristic short-term tensile strength   Iongitudinal transversal   [MPa]   2 2900   ISO 10406-1     Etmm   Mean Young's modulus related to the fiber   Iongitudinal transversal   [MPa]   2 235000   ISO 10406-1     Etmm   Mean Young's modulus related to the fiber   Iongitudinal transversal   [MPa]   2 235000   ISO 10406-1     Etmm   Characteristic		Recommended operating temperature range		[°C]	-20 to +80	-
Mechanical properties   Unit   Value   Standard     Characteristic short-term tensile strength related to   longitudinal   1150   ISO 10406-1     Enrow   Young's modulus related to the nominal cross-section   longitudinal   IMPa]   94000   ISO 10406-1     Enrow   Section   transversal   IMPa]   94000   ISO 10406-1     fumum   Mean short-time tensile strength related to the   longitudinal   IMPa] $\geq$ 3880   ISO 10406-1     fumum   Mean short-time tensile strength related to the   longitudinal   IMPa] $\geq$ 3880   ISO 10406-1     fumum   Characteristic short-term tensile strength related to the fiber   longitudinal   IMPa] $\geq$ 2900   ISO 10406-1     fumum   Characteristic short-term tensile strength   longitudinal   IMPa] $\geq$ 2900   ISO 10406-1     fumum   related to the fiber   longitudinal   IMPa] $\geq$ 2900   ISO 10406-1     fumum   related to the fiber cross-sectional area   transversal   IMPa] $\geq$ 2900   ISO 10406-1     fumum   related to the fiber cross-sectional area   transversal   IMPa] $\geq$ 235000   ISO 10406-1		Building material class components <sup>1)</sup>		[-]	A2, non-combustible	DIN 4102-1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Building material class reinforcement grid		[-]	E, normally flammable	EN 13501-1
Immkthe nominal cross-sectional areatransversal[MPa][IIS0ISO 10406-1EmmYoung's modulus related to the nominal cross- sectionlongitudinal transversal94000ISO 10406-1fumumMean short-time tensile strength related to the fiber cross-sectional arealongitudinal transversal $MPa$ ] $\geq$ 3880ISO 10406-1fumumMean short-time tensile strength related to the fiber cross-sectional arealongitudinal transversal $\geq$ 3880ISO 10406-1fumumCharacteristic short-term tensile strength related to the fiber cross-sectional arealongitudinal transversal $\geq$ 2900ISO 10406-1fumumCharacteristic clongation at failure under tensile load of the non-metallic reinforcementlongitudinal transversal $\geq$ 235000ISO 10406-1EmmuCharacteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal $\geq$ 12,2ISO 10406-1Further key valuesUnitValueStandarddagRecommended maximum grain size in concrete[mm]6,0 $\pm$ 16 mmSingle gridLength Width[m]3,0 $\pm$ 12 mmRoll in CARGO System CS <sup>21</sup> Length Width[m] $\leq$ 130,0-Roll in CARGO System CS <sup>21</sup> Length Width[m] $\leq$ 130,0-RollLength (m] $\leq$ 20,0-	Mec	hanical properties		Unit	Value	Standard
the hominal cross-sectional areatransversal1150FirmYoung's modulus related to the nominal cross- sectionIongitudinal transversal94000ISO 10406-1Firm, mMean short-time tensile strength related to the fiber cross-sectional areaIongitudinal transversal $ MPa $ $\geq$ 3880ISO 10406-1Firm, mCharacteristic short-term tensile strength related to the fiber cross-sectional areaIongitudinal transversal $ MPa $ $\geq$ 2900ISO 10406-1Elem, mMean Young's modulus related to the fiber cross-sectional areaIongitudinal transversal $ MPa $ $\geq$ 235000ISO 10406-1Elem, mMean Young's modulus related to the fiber cross-sectional areaIongitudinal transversal $ MPa $ $\geq$ 235000ISO 10406-1Elem, mCharacteristic elongation at failure under tensile load of the non-metallic reinforcementIongitudinal transversal $ MPa $ $\geq$ 12,2ISO 10406-1FrankCharacteristic tensile force transmission of the non- metallic reinforcement per m widthIongitudinal transversal $ MPa $ $\geq$ 12,2ISO 10406-1Further key valuesUnitValueStandard d $   -$ Standard goods varietyUnitValueStandard d $-$ Single gridLength Width[m] $6,0$ $\pm$ 16 mmRoll in CARGO System CS -2)Length Width[m] $<$ $=$ Roll in CARGO System CS -0 $-$ Width[m] $<$ $=$ Roll in CARG	£	Characteristic short-term tensile strength related to	longitudinal	- [MPa]	1150	ISO 10406-1
EnrIsolary 5 modulo related to the holm in errorsIsolary 5 modulo related to the holm in errorsIsolary 6 modulo related to the fiber cross-sectional areaIsolary 6 modulo related to the	Tnm,k		transversal		1150	
sectiontransversal94000Mean short-time tensile strength related to the fiber cross-sectional arealongitudinal transversal $\geq 3880$ ISO 10406-1Characteristic short-term tensile strength related to the fiber cross-sectional arealongitudinal transversal $\geq 2900$ $\geq 2900$ ISO 10406-1Etamm cross-sectional arealongitudinal transversal $\geq 2900$ $\geq 2900$ ISO 10406-1Etamm cross-sectional arealongitudinal transversal $\geq 2900$ $\geq 235000$ ISO 10406-1Etamm cross-sectional arealongitudinal transversal $\geq 235000$ $\geq 235000$ ISO 10406-1Etamm metallic reinforcement per m widthlongitudinal transversal $\geq 235000$ $\geq 12,2$ ISO 10406-1Furnk metallic reinforcement per m widthlongitudinal transversal $\geq 12,2$ $\leq 12,2$ ISO 10406-1Furnk dg Recommended maximum grain size in concrete[mm] $T4$ $\leq 130,0$ $T4$ $\leq 130,0$ $=$ Single gridLength $Midth$ <t< td=""><td></td><td rowspan="2"></td><td>longitudinal</td><td rowspan="2">- [MPa]</td><td>94000</td><td rowspan="2">- ISO 10406-1</td></t<>			longitudinal	- [MPa]	94000	- ISO 10406-1
trumm fiber cross-sectional areaISO 10406-1 transversalISO 10406-1 ≥ 3880frumk related to the fiber cross-sectional areaIongitudinal transversal[MPa]≥ 2900 ≥ 2900ISO 10406-1 ≥ 2900Etamm related to the fiber cross-sectional areaIongitudinal transversal[MPa]≥ 2900 ≥ 235000ISO 10406-1 ≥ 235000Etamm rows-sectional areaIongitudinal transversal[MPa]≥ 23000 ≥ 235000ISO 10406-1 ≥ 235000Etamm rows-sectional areaIongitudinal transversal[MPa]≥ 235000 ≥ 12,2ISO 10406-1 ≥ 12,2Etamm load of the non-metallic reinforcementIongitudinal transversal[MPa]≥ 12,2 ≥ 12,2ISO 10406-1 ≥ 12,2Famk metallic reinforcement per m widthIongitudinal transversal[N/m]74 T4ISO 10406-1Further key valuesUnit valueValueStandard da dGa Recommended maximum grain size in concrete[mm]16-Standard goods varietyUnit WidthValueTolerance ConcreteSingle gridLength Width[m]≤ 130,0-Roll in CARGO System CS <sup>2)</sup> Length Width[m]≤ 130,0-Roll in CARGO System CS-U or CS-S <sup>2)</sup> Length Width[m]≤ 130,0-Roll in CARGO System CS-U or CS-S <sup>2)</sup> Length Width2,30± 12 mm ≥ 130,0Roll in CARGO System CS-U or CS-S <sup>2)</sup> Length Width≤ 250,0-	Enm		transversal		94000	
Itrmum fiber cross-sectional areatransversal $[MPa]$ $\geq$ 3880ISO 10406-1Characteristic short-term tensile strength related to the fiber cross-sectional arealongitudinal transversal $\geq$ 2900ISO 10406-1Etmm cross-sectional areaMean Young's modulus related to the fiber cross-sectional arealongitudinal transversal $\geq$ 235000ISO 10406-1Etmm cross-sectional areaIso 10406-1 $\geq$ 235000ISO 10406-1 $\geq$ 235000ISO 10406-1Etmm cross-sectional areaIso 10406-1 $\geq$ 235000ISO 10406-1 $\geq$ 235000ISO 10406-1Etmm cross-sectional areaIso 10406-1 $\geq$ 235000ISO 10406-1 $\geq$ 235000ISO 10406-1Etmm cross-sectional areaIso 10406-1Iso 10406-1Iso 10406-1Further key valuesIso 10406-1Iso 10406-1Iso 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concreteImmIso 10406-1Single gridLength WidthImm6,0 $\pm$ 16 mmRoll in CARGO System CS <sup>2)</sup> Length WidthImm $\leq$ 130,0 $-$ </td <td>c</td> <td rowspan="2"></td> <td>longitudinal</td> <td rowspan="2">- [MPa]</td> <td>≥ 3880</td> <td rowspan="2">ISO 10406-1</td>	c		longitudinal	- [MPa]	≥ 3880	ISO 10406-1
Itrmukrelated to the fiber cross-sectional areaItransversalIMPa] $\geq 2900$ ISO 10406-1EtnmumMean Young's modulus related to the fiber cross-sectional areaIongitudinal transversalIMPa] $\geq 235000$ ISO 10406-1EtnmukCharacteristic elongation at failure under tensile load of the non-metallic reinforcementIongitudinal transversal $\mathbb{MPa}$ ] $\geq 235000$ ISO 10406-1EnmukCharacteristic tensile force transmission of the non- metallic reinforcement per m widthIongitudinal transversal $\mathbb{MN}$ $\geq 12,2$ ISO 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueStandardSingle gridLength Width $\mathbb{M}$ $3,0$ $\pm 12,m$ Roll in CARGO System CS <sup>2)</sup> Length Width[m] $\leq 130,0$ -Roll in CARGO System CS <sup>-2)</sup> Length Width[m] $\leq 250,0$ -RollLength (m][m] $\leq 250,0$ -RollLength (m][m] $\leq 250,0$ -	T <sub>f,nm,</sub> m		transversal		≥ 3880	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	c	Characteristic short-term tensile strength	longitudinal	- [MPa]	≥ 2900	ISO 10406-1
Efinm,mCross-sectional areaISO 10406-1 $\epsilon_{nm,uk}$ Characteristic elongation at failure under tensile load of the non-metallic reinforcementlongitudinal transversal $\geq 12,2$ ISO 10406-1 $\epsilon_{nm,uk}$ Characteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal $\gamma4$ (kN/m)ISO 10406-1 $F_{nm,k}$ Characteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal $\gamma4$ (kN/m)ISO 10406-1Further key valuesUnitValueStandard $d_g$ Recommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceSingle gridLength Width[m] $6,0$ $\pm 12$ mmRoll in CARGO System CS <sup>2</sup> )Length Width[m] $\leq 130,0$ -Roll in CARGO System CS-U or CS-S <sup>2</sup> )Length Width[m] $\leq 130,0$ -RollLength (m] $\epsilon 250,0$ -	T <sub>f,nm,k</sub>	related to the fiber cross-sectional area	transversal		≥ 2900	
Efrommcross-sectional areatransversal[MPA] $\geq 235000$ ISO 10406-1EnnukCharacteristic elongation at failure under tensile load of the non-metallic reinforcementlongitudinal transversal $[%o]$ $\geq 12,2$ ISO 10406-1Fnm,kCharacteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal $[%o]$ $\geq 12,2$ ISO 10406-1Further key valueslongitudinal transversal $[KN/m]$ $74$ ISO 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceSingle gridLength Width[m] $6,0$ $\pm 16$ mmRoll in CARGO System CS 2)Length Width[m] $\leq 130,0$ -Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq 130,0$ -Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq 250,0$ -Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq 250,0$ -	F		longitudinal	- [MPa]	≥ 235000	ISO 10406-1
Enmukload of the non-metallic reinforcementtransversal $[760]$ $\geq 12,2$ ISO 10406-1Fnm,kCharacteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal74ISO 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceStandard goods varietyUnitValueToleranceSingle grid $\frac{16}{0.0}$ $\pm 16$ mmRoll in CARGO System CS <sup>2</sup> )Length Width[m] $\leq 130,0$ -Width[m] $\leq 130,0$ -Width[m] $\leq 250,0$ -Roll in CARGO System CS <sup>2</sup> )Length Width[m] $\leq 250,0$ -RollLength (m] $\leq 130,0$ -RollLength (m] $\leq 130,0$ -RollEngth (m] $\leq 250,0$ -	E <sub>f,nm,m</sub>		transversal		≥ 235000	
Enmukload of the non-metallic reinforcementtransversal $[700]$ $\geq 12,2$ ISO 10406-1Fnm,kCharacteristic tensile force transmission of the non- metallic reinforcement per m widthlongitudinal transversal74ISO 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concrete[mm]16-Standard goods varietySingle gridLength Width[m] $6,0$ $\pm 16$ mmRoll in CARGO System CS <sup>2</sup> )Length Width[m] $\leq 130,0$ -Roll in CARGO System CS -U or CS-S <sup>2</sup> )Length Width[m] $\leq 130,0$ -RollCARGO System CS -U or CS-S <sup>2</sup> )Length Width[m] $\leq 250,0$ -RollCARGO System CS -U or CS-S <sup>2</sup> )Length Width[m] $\leq 250,0$ -		-	longitudinal	- [‰]	≥ 12,2	ISO 10406-1
FrankIndication of the formImage of the formIso 10406-1Further key valuesUnitValueStandarddgRecommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceSingle gridLength Width[m]6,0 $\pm$ 16 mmRoll in CARGO System CS <sup>2)</sup> Length Width[m] $\leq$ 130,0-Roll in CARGO System CS-U or CS-S <sup>2)</sup> Length Width[m] $\leq$ 130,0-RollLength Width[m] $\leq$ 130,0-RollLength Width[m] $\leq$ 130,0-RollLength Width[m] $\leq$ 250,0-	E <sub>nm,uk</sub>		transversal		≥ 12,2	
metallic reinforcement per m widthtransversal74Further key valuesUnitValueStandard $d_g$ Recommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceSingle gridLength Width[m]6,0 $\pm$ 16 mmSingle gridLength Width[m]6,0 $\pm$ 16 mmRoll in CARGO System CS 2)Length Width[m] $\leq$ 130,0-Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq$ 130,0-RollLength Width[m] $\leq$ 250,0-RollLength Width[m] $\leq$ 250,0-		Characteristic tensile force transmission of the non-	longitudinal		74	ISO 10406-1
dgRecommended maximum grain size in concrete[mm]16-Standard goods varietyUnitValueToleranceSingle gridLength Width[m] $6,0$ $\pm 16 \text{ mm}$ Single gridLength Width[m] $2,30$ $\pm 12 \text{ mm}$ Roll in CARGO System CS 2)Length Width[m] $\leq 130,0$ -Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq 130,0$ -RollLength Width[m] $\leq 250,0$ -RollLength (m][m] $\leq 250,0$ -	Enm,k	metallic reinforcement per m width	transversal	- [kN/m]	74	
Standard goods varietyUnitValueToleranceSingle grid $\begin{tabular}{lllllllllllllllllllllllllllllllllll$	Furti	her key values		Unit	Value	Standard
Length Width $6,0$ $\pm 16 \text{ mm}$ Single gridWidth $[m]$ $2,30$ $\pm 12 \text{ mm}$ Roll in CARGO System CS 2)Length Width $[m]$ $\leq 130,0$ $-$ Roll in CARGO System CS-U or CS-S 2)Length Width $[m]$ $\leq 130,0$ $-$ RollLength $2,30$ $\pm 12 \text{ mm}$ $\leq 130,0$ $-$ RollLength $2,30$ $\pm 12 \text{ mm}$ $\leq 250,0$ $-$	dg	Recommended maximum grain size in concrete		[mm]	16	-
Length Width $6,0$ $\pm 16 \text{ mm}$ Single gridWidth $[m]$ $2,30$ $\pm 12 \text{ mm}$ Roll in CARGO System CS 2)Length Width $[m]$ $\leq 130,0$ $-$ Roll in CARGO System CS-U or CS-S 2)Length Width $[m]$ $\leq 130,0$ $-$ RollLength $2,30$ $\pm 12 \text{ mm}$ $\leq 130,0$ $-$ RollLength $2,30$ $\pm 12 \text{ mm}$ $\leq 250,0$ $-$	Stan	dard goods variety		Unit	Value	Tolerance
Single gridWidth $2,30$ $\pm 12 \text{ mm}$ Roll in CARGO System CS 2)Length Width[m] $\leq 130,0$ -Roll in CARGO System CS-U or CS-S 2)Length Width[m] $\leq 130,0$ -RollLength Width[m] $\leq 130,0$ -RollLength $\leq 250,0$	Single grid -		Length			
Length Width $\leq 130,0$ -Roll in CARGO System CS 2) $\sum_{i=1}^{i}$ $i=12 \text{ mm}$ Roll in CARGO System CS-U or CS-S 2) $\sum_{i=1}^{i}$ $i=130,0$ -Width $m$ $\leq 130,0$ -Width $m$ $\leq 130,0$ -Roll $\sum_{i=1}^{i}$ $\sum_{i=1}^{i}$ $\sum_{i=1}^{i}$ Roll $\sum_{i=1}^{i}$ $\sum_{i=1}^{i}$ $\sum_{i=1}^{i}$						
Roll in CARGO System CS $^{(2)}$ Width3,0 $\pm$ 12 mmRoll in CARGO System CS-U or CS-S $^{(2)}$ Length Width[m] $\leq$ 130,0-RollLength Length2,30 $\pm$ 12 mmRollLength (m] $\leq$ 250,0-						_
Length Width $\leq 130,0$ -Roll in CARGO System CS-U or CS-S 2) $Width$ $[m]$ $\leq 130,0$ -Width $[m]$ $2,30$ $\pm 12 \text{ mm}$ RollLength $[m]$ $\leq 250,0$ -	Roll in CARGO System CS <sup>2)</sup>			- [m]		± 12 mm
Roll in CARGO System CS-U or CS-S <sup>-2</sup> ) Image: Constraint of the system CS-U or CS-S <sup>-2</sup> )   Width 2,30   ± 12 mm   Length   [m]	Roll in CARGO System CS-U or CS-S <sup>2)</sup> -			- [m]		_
Length≤ 250,0						± 12 mm
				- [m]		-
	Roll					+ 12 mm

Single grid up to 3,0 m wide on request. The maximum length of the grid as a roll depends on the product type and the type of transport. Please enquire before ordering. Please specify the required length of the grid as a roll when ordering.

#### **Transport and storage**

Non-metallic reinforcements from solidian GmbH must not be damaged during transportation, storage, processing and installation and must not be exposed to temperatures higher than 80°C. They must be stored dry, protected from the weather and without touching the ground. They must be protected from UV radiation and moisture until concreting and be free from bond-reducing impurities (e.g. grease, soil, loose concrete residues).

<sup>1)</sup> Building material class for components from a component thickness of 30 mm with a minimum concrete cover of 14 mm or for components with a component thickness of 30 mm and a single layer of centrally arranged reinforcement grid.

<sup>2)</sup> The CARGO System CS is a stacking and transport rack for our reinforcement grids. In the CS-U version with additional unwinding device. In the CS-S version with additional unwinding device and cutting device.

### **TECHNICAL PRODUCT DATA SHEET**

# solidian.

#### Measurement

Specified values were determined on the product itself. Deviating properties may occur in the structural component or during processing. We recommend checking the values by suitable structural component tests with the concrete formulation used in each case.

### Tests

As part of our in-house production control, two test units with 6 tensile tests each per reinforcement direction are carried out for each production order for quality assurance purposes, from which the characteristic short-term tensile strength is determined. All other measured values are determined as part of a comprehensive product gualification and are not subject to continuous control

The described tensile tests per production order are included in the sales price. If you need an extended production control for your construction project, please contact us. We will be happy to provide you with a non-binding quotation for additional production-related tests.

### **Country-specific regulations**

For the use of the product, the respective national regulations at the place of use apply, in Germany for example the building regulations of the federal states, and the technical provisions based on these regulations.

The design is generally carried out in accordance with the applicable standards for reinforced concrete components, whereby adjustments must be made for fiber composite reinforcements if applicable standards, guidelines (e.g. guideline for Germany "Concrete components with non-metallic reinforcement" of the German Committee for Reinforced Concrete (DAfStb) and the co-applicable standards cited in the guideline) etc. do not exist for reinforcements made of fiber reinforced polymer materials. Accordingly, the respective national standards and regulations must be taken into account in the design.

### **Processing information**

All work must only be carried out by trained personnel.

Damaged fiber bundles (resin spalling, brittle areas, etc.) must not be installed, as the specified load-bearing capacity cannot be guaranteed. The specified values of the product only apply when used as intended.

For further information, please refer to the current Technical Information for our solidian reinforcement products.

### **Ecology and health protection**

REGULATION (EC) NO. 1907/2006 - REACH.

This product is an article as defined in Article 3 of Regulation (EC) No 1907/2006 (REACH). It does not contain substances that are released from the article during normal use. A safety data sheet according to Article 31 of the same regulation is not required to place this product on the market, to transport it or to use it. For safe use, follow the instructions from this data sheet. To our current knowledge, this product does not contain any SVHC (Substances of Very High Concern) according to Annex XIV of the REACH Regulation or substances published on the Candidate List by the European Chemicals Agency at concentrations above 0,1% (w/w).

### **Industrial safety and health**

The currently valid legal regulations on occupational health and safety must be observed during all transportation activities. Protective measures, such as wearing cut-resistant gloves, safety goggles and a dust mask, must be observed when working with cutting equipment. The specific handling of fiber reinforced polymers should be based on the respective national technical regulations.

### **Legal information**

The above information is based on our knowledge and experience under normal circumstances, provided that the product has been transported, stored and used or processed properly and in accordance with the information in this product data sheet and the Technical Information for our solidian reinforcement products. The work results that can be achieved with our products depend in particular on their use and processing. The suitability of the product for the specific application must be checked in advance on your own responsibility.

Since non-metallic reinforcements are not yet regulated by building authorities in most countries, planners, specialist planners, building authorities, structural engineers, experts, etc. must be consulted for load-bearing components and countryspecific regulations must be observed.

We reserve the right to make changes to the product specifications. Third-party property rights must be observed. In all other respects, our respective terms and conditions of sale and delivery apply. The latest technical product data sheet at the time of purchase of our products shall apply.

Date: 11.11.2024 | Version: 2411 | solidian GRID Q27-CCE-68 Technical Product Data Sheet v2411.docx



Sigmaringer Straße 150 72458 Albstadt Germany 🔇 +49 7431 103135 ☑ info@solidian.com

P. Slavka Rozgaja 3 47000 Karlovac Croatia

+385 47 693300







BUILEAU