TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 30/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			30/5
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	37
Tolerance (1)		kN/m	- 7
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	213
Strip width - MD (3)		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 450
Grid aperture warp/weft ⁽³⁾		mm	51 x 426
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	100
Roll weight ⁽²⁾		kg	93
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

BIM collection of ParaGrid[™] BIM collection of ParaGrid[™] geogrids available for download at bimstore.co

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 40/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			40/5
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	46
Tolerance (1)		kN/m	- 6
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	218
Strip width - MD (3)		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 450
Grid aperture warp/weft ⁽³⁾		mm	51 x 426
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	100
Roll weight ⁽²⁾		kg	95
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 50/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid [™]			50/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	57	
Tolerance (1)		kN/m	- 7	
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	244	
Strip width - MD ⁽³⁾		mm	24	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	100	
Roll weight ⁽²⁾		kg	105	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Mean measured dimensions Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.

MD : Machine Direction : Cross Machine Direction CMD



THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 65/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			65/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	70	
Tolerance (1)		kN/m	- 5	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	312	
Strip width - MD (3)		mm	24	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	80	
Roll weight ⁽²⁾		kg	108	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 80/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			80/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	86	
Tolerance (1)		kN/m	- 6	
Nominal strain at T_{ch} - MD $^{(1)}$	EN 180 10210	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T_{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	362	
Strip width - MD (3)		mm	24	
Strip width - CMD (3)		mm	24	
Grid size warp/weft ⁽³⁾		mm	75 x 450	
Grid aperture warp/weft (3)		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	80	
Roll weight ⁽²⁾		kg	123	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Mean measured dimensions Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.

: Machine Direction : Cross Machine Direction CMD



THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 90/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			90/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	96	
Tolerance (1)		kN/m	- 6	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	397	
Strip width - MD (3)		mm	24	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	80	
Roll weight ⁽²⁾		kg	134	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible:



Mean measured dimensions Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

(2) (3) (4) (5) (6) Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.

: Machine Direction : Cross Machine Direction CMD



THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 100/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			100/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	106	
Tolerance (1)		kN/m	- 6	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	416	
Strip width - MD (3)		mm	24	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	80	
Roll weight ⁽²⁾		kg	140	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 110/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			110/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	116	
Tolerance (1)		kN/m	- 6	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN ISO 10319	%	9.0	
Avg. tensile strength - CMD (1)		kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	441	
Strip width - MD ⁽³⁾		mm	24	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	51 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	50	
Roll weight ⁽²⁾		kg	148	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 120/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			120/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	125	
Tolerance (1)		kN/m	- 5	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN ISO 10319	%	9.0	
Avg. tensile strength - CMD (1)		kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	452	
Strip width - MD (3)		mm	33	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	42 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	50	
Roll weight ⁽²⁾		kg	99	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

Maccaferri operates under strict quality assurance and management procedures. Please visit the website of your local subsidiary for details of their Certifications



BIM collection of ParaGrid[™] BIM collection of ParaGrid[™] geogrids available for download at bimstore.co © 2019 Maccaferri. All rights reserved. Maccaferri will enforce Copyright

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 135/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			135/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	141	
Tolerance (1)		kN/m	- 6	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	510	
Strip width - MD ⁽³⁾		mm	33	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	42 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	50	
Roll weight ⁽²⁾		kg	110	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value; Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGridTM product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 150/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			150/5	
Mechanical properties				
Avg. tensile strength - MD ⁽¹⁾		kN/m	160	
Tolerance (1)		kN/m	- 10	
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0	
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6	
Tolerance (1)		kN/m	- 1	
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0	
Physical Properties				
Strip reinforcement polymer			PET	
Strip coating polymer			PE	
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	567	
Strip width - MD ⁽³⁾		mm	33	
Strip width - CMD ⁽³⁾		mm	24	
Grid size warp/weft (3)		mm	75 x 450	
Grid aperture warp/weft ⁽³⁾		mm	42 x 426	
Roll width ⁽⁴⁾		m	3.90	
Roll length ⁽⁵⁾		m	50	
Roll weight ⁽²⁾		kg	121	
Environmental and Sustainability Properties				
Content of SVHC ⁽⁶⁾		%	≤ 0.1	
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00	
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04	
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03	

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value;

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 160/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			160/5
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	170
Tolerance (1)		kN/m	- 10
Nominal strain at T _{ch} - MD ⁽¹⁾	EN ISO 10319	%	9.0
Avg. tensile strength - CMD (1)		kN/m	6
Tolerance (1)		kN/m	- 1
Nominal strain at T_{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area (2)	EN ISO 9864	g/m²	604
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 450
Grid aperture warp/weft ⁽³⁾		mm	42 x 426
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	128
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.43E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM

ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

BIM collection of ParaGrid[™] geogrids available for download at bimstore.co

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 175/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			175/5
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	185
Tolerance (1)		kN/m	- 10
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area (2)	EN ISO 9864	g/m²	656
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 450
Grid aperture warp/weft ⁽³⁾		mm	42 x 426
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	138
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.43E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGridTM product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 200/5

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			200/5
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	212
Tolerance (1)		kN/m	- 12
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	6
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	705
Strip width - MD (3)		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 450
Grid aperture warp/weft ⁽³⁾		mm	42 x 426
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	147
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.38E+00
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.51E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.43E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 30/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			30/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	37
Tolerance (1)		kN/m	- 7
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0
Avg. tensile strength - CMD (1)	EN 150 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T_{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	328
Strip width - MD ⁽³⁾		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	51 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	73
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 50/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			50/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	57
Tolerance (1)		kN/m	- 7
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	367
Strip width - MD (3)		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	51 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	79
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 80/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, E

ParaGrid™			80/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	86
Tolerance (1)		kN/m	- 6
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	16
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	435
Strip width - MD ⁽³⁾		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	51 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	93
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com <u>www.maccaferri.com</u>

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			100/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	106
Tolerance (1)		kN/m	- 6
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	16
Tolerance (1)		kN/m	- 1
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	488
Strip width - MD (3)		mm	24
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	51 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	103
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016;
Nominal value, where no specific tolerance is indicated a standard of 10% is admissible:



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value; Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGridTM product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 120/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			120/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	130
Tolerance (1)		kN/m	- 10
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	547
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	42 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	108
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) ⁽⁶⁾	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

BIM collection of ParaGrid[™]

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 150/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			150/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	160
Tolerance (1)		kN/m	- 10
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T_{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area (2)	EN ISO 9864	g/m²	671
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	42 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	130
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) ⁽⁶⁾		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; Nominal value, where no specific tolerance is indicated a standard of 10% is admissible:



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible; Standard value:

Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

Maccaferri operates under strict quality assurance and management procedures. Please visit the website of your local subsidiary for details of their Certifications



BIM collection of ParaGrid[™] geogrids available for download at bimstore.co BIM collection of ParaGrid[™]

(1)



TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 160/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			160/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	170
Tolerance (1)		kN/m	- 10
Nominal strain at T _{ch} - MD ⁽¹⁾		%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area ⁽²⁾	EN ISO 9864	g/m²	700
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	42 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	138
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016; (1) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: (2) (3) (4) (5) (6)



Nominal value, where no specific tolerance is indicated a standard of 1% is admissible;

Standard value: Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to the ParaGrid[™] product family with validity till December 2023.









ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com

TECHNICAL DATA SHEET

Rev: 13, Date 28.10.2019

PARAGRID[™] 200/15

STRIP BONDED GEOGRIDS WITH HIGH TENACITY POLYESTER CORE

ParaGrid[™] geogrids are planar structures consisting of a biaxial array of composite geosynthetic strips. The strips comprise of a core of high tenacity polyester tendons encased in a polyethylene sheath. ParaGrid[™] geogrids are CE certified (0038-CPR-5392) for reinforcement applications according to EN 13249:2016, EN 13250:2016, EN 13251:2016, EN 13253:2016, EN 13254:2016, EN 13255:2016, EN 13255;2016, EN 13255:2016, EN 13255;2000;2000;2000;2000;20 13257:2016, EN 13265:2016, and BBA HAPAS certified (16/H249 Product Sheet 1) to comply with the design done according to the BS 8006 and to meet the requirements of Highways England and local highway authorities.

ParaGrid™			200/15
Mechanical properties			
Avg. tensile strength - MD ⁽¹⁾		kN/m	212
Tolerance (1)		kN/m	- 12
Nominal strain at T _{ch} - MD ⁽¹⁾	EN 100 40240	%	9.0
Avg. tensile strength - CMD (1)	EN ISO 10319	kN/m	17
Tolerance (1)		kN/m	- 2
Nominal strain at T _{ch} - CMD ⁽¹⁾		%	9.0
Physical Properties			
Strip reinforcement polymer			PET
Strip coating polymer			PE
Mass per unit area (2)	EN ISO 9864	g/m²	781
Strip width - MD ⁽³⁾		mm	33
Strip width - CMD ⁽³⁾		mm	24
Grid size warp/weft (3)		mm	75 x 225
Grid aperture warp/weft ⁽³⁾		mm	42 x 201
Roll width ⁽⁴⁾		m	3.90
Roll length ⁽⁵⁾		m	50
Roll weight ⁽²⁾		kg	156
Environmental and Sustainability Properties			
Content of SVHC ⁽⁶⁾		%	≤ 0.1
Global Warming Potential (GWP _{100yrs}) ⁽⁶⁾	ISO 14025	kg CO ₂ -Eq.	≤ 2.48E+00
Eutrophication Potential (EP) (6)	EN 15804	kg Phosphate-Eq.	≤ 5.74E-04
Acidification Potential (AP) (6)		kg SO ₂ -Eq.	≤ 4.62E-03

Short-term tests in accordance with EN ISO 10319:2015. The values given are mean values of ultimate strength and tolerance values correspond to the 95% confidence level to establish the characteristic short-term tensile strength (T_{eh}) in accordance with EN 13251:2016; (1) (2) (3) (4) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible: Mean measured dimensions; Nominal value, where no spe

e is indicated a standard of 1% is admissible



• /	
5)	Standard value;
3)	Value reported in the EPD certificate S-P-01461 issued in accordance with ISO 14125 and EN 15804+A1 to Maccaferri with reference to
<i>.</i>	the ParaGrid [™] product family with validity till December 2023





THE INTERNATIONAL EPD® SYSTEM



ParaGrid[™] is a registered trademark of Linear Composite Ltd.

For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

Officine Maccaferri S.p.A. Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy T: (+39) 051 643 6000 F: (+39) 051 643 6201 E: info@hq.maccaferri.com www.maccaferri.com