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ELEKTRISOLA BONDABLE MAGNET WIRE

General Properties

Product Code	AB15	ABN15
Product Name	Butybond B155	Buty Nylon ABN15
Base Coat	Mod. Polyurethane	Mod. Polyurethane overcoated with Polyamide
Base Coat Type	P155	PN155
Bond Coat	Polyvinylbutyral	Polyvinylbutyral
Bond Coat Type	AB	AB
IEC	IEC 60317-35, 60317-2	
NEMA	MW 131 - C	MW 136 - C
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Low resoftening temperature, not pinhole free	Low resoftening temperature, higher mechanical properties of base coat
Storage in Months	≤ 6 (non hygroscopic)	≤ 6 (non hygroscopic)
Applications	Stepping motors for quartz watches, instrument coils, voice coils, sensors, transponders	Transponders

To be used as a guideline only

Product Code	CBP15	FS15
Product Name	Butybond CBP15	Solabond FS15
Base Coat	Mod. Polyurethane	Mod. Polyurethane
Base Coat Type	P155p	P155
Bond Coat	Polyvinylbutyral	Polyamide
Bond Coat Type	CB	FS
IEC	IEC 60317-35, 60317-2	IEC 60317-35, 60317-2
NEMA	MW 131 - C	MW 131 - C
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Solvent bonding type, fast drying	Solvent bonding possible, not pinhole free
Storage in Months	≤ 6 (non hygroscopic)	≤ 3 (hygroscopic)
Applications	Stepping motors for quartz watches, instrument coils, voice coils, sensors	Instrument coils, loudspeakers, small motors, sensors

To be used as a guideline only

Product Code	FSP15	HS15
Product Name	Solabond FSP15	Solabond HS15
Base Coat	Mod. Polyurethane	Mod. Polyurethane
Base Coat Type	P155p	P155
Bond Coat	Polyamide	Non Hygroscopic Polyamide
Bond Coat Type	FS	HS
IEC	IEC 60317-35, 60317-2	IEC 60317-35, 60317-2
NEMA	MW 131 - C	MW 131 - C
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Solvent bonding possible	Excellent Hot Air bonding type, not pinhole free
Storage in Months	≤ 3 (hygroscopic)	≤ 6 (non hygroscopic)
Applications	Instrument coils, loudspeakers, small motors, sensors	Instrument coils, loudspeakers, small motors, sensors

To be used as a guideline only

Product Code	HSP15	FSP18
Product Name	Solabond HSP15	Solabond FSP18
Base Coat	Mod. Polyurethane	Mod. Polyurethane
Base Coat Type	P155p	P180
Bond Coat	Non Hygroscopic Polyamide	Polyamide
Bond Coat Type	HS	FS
IEC	IEC 60317-35, 60317-2	IEC 60317-35
NEMA	MW 131 - C	
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Excellent Hot Air bonding type	Solvent Bonding possible, good thermal properties of base coat
Storage in Months	≤ 6 (non hygroscopic)	≤ 5 (hygroscopic)
Applications	Instrument coils, loudspeakers, small motors, sensors	Instrument coils, loudspeakers, small motors, sensors, transponders

To be used as a guideline only

Product Code	HSP18	FS18
Product Name	Solabond HS18	Solabond FS18
Base Coat	Mod. Polyurethane	Polyesterimide
Base Coat Type	P180	E180
Bond Coat	Non Hygroscopic Polyamide	Polyamide
Bond Coat Type	HS	FS
IEC	IEC 60317-35	IEC 60317-36
NEMA		
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Excellent Hot Air bonding type, good thermal properties of base coat	Very good thermal properties of base coat
Storage in Months	≤ 6 (non hygroscopic)	≤ 5 (hygroscopic)
Applications	Instrument coils, loudspeakers, small motors, sensors, transponders	Loudspeakers, small motors

Product Code	HS18	FS20
Product Name	Solabond HS18	Solabond FS20
Base Coat	Polyesterimide	Theic- Mod Polyesterimide
Base Coat Type	E180	A200
Bond Coat	Non Hygroscopic Polyamide	Polyamide
Bond Coat Type	HS	FS
IEC	IEC 60317-36	IEC 60317-37
NEMA		
Diameters Available	58 – 24 AWG	58 – 24 AWG
Properties	Excellent Hot Air bonding type, very good thermal properties of base coat	Excellent thermal properties of base coat
Storage in Months	≤ 6 (non hygroscopic)	≤ 5 (hygroscopic)
Applications	Loudspeakers, small motors	Loudspeakers, small motors

to be used as a guideline only

Thermal Values of Base Coat

Product Code	AB15	ABN15
Temp Index 20,000 h acc. to ASTM D 2307	158°C	170°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	225°C	225°C
30 AWG: acc to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	230°C	230°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	190°C	190°C
30 AWG: acc to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	180°C	180°C

to be used as a guideline only

Product Code	CBP15	FS15
Temp Index 20,000 h acc. to ASTM D 2307	158°C	158°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	225°C	225°C
30 AWG: acc to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	230°C	230°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	190°C	190°C
30 AWG: acc to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	180°C	180°C

to be used as a guideline only

Product Code	FSP15	HS15
Temp Index 20,000 h acc. to ASTM D 2307	158°C	158°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	225°C	225°C
30 AWG: acc to NEMA MW1000, 3.50	≥ 200°C	≥ 200°C
Elektrisola Typical Value	230°C	230°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	190°C	190°C
30 AWG: acc to NEMA MW1000, 3.5	≥ 175°C	≥ 175°C
Elektrisola Typical Value	180°C	180°C

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Product Code	HSP15	FSP18
Temp Index 20,000 h acc. to ASTM D 2307	158°C	192°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50	≥ 200°C	
Elektrisola Typical Value	225°C	260°C
30 AWG: acc to NEMA MW1000, 3.50	≥ 200°C	
Elektrisola Typical Value	230°C	265°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5	≥ 175°C	
Elektrisola Typical Value	190°C	210°C
30 AWG: acc to NEMA MW1000, 3.5	≥ 175°C	
Elektrisola Typical Value	180°C	200°C

to be used as a guideline only

Product Code	HSP18	FS18
Temp Index 20,000 h acc. to ASTM D 2307	192°C	195°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50		
Elektrisola Typical Value	260°C	315°C
30 AWG: acc to NEMA MW1000, 3.50		
Elektrisola Typical Value	265°C	325°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5		
Elektrisola Typical Value	210°C	260°C
30 AWG: acc to NEMA MW1000, 3.5		
Elektrisola Typical Value	200°C	250°C

to be used as a guideline only

Product Code	HS18	FS20
Temp Index 20,000 h acc. to ASTM D 2307	195°C	210°C
Cut Through Temp		
44 AWG: acc. to NEMA MW1000, 3.50		
Elektrisola Typical Value	315°C	350°C
30 AWG: acc to NEMA MW1000, 3.50		
Elektrisola Typical Value	325°C	360°C
Heat Shock		
44 AWG: acc. to NEMA MW1000, 3.5		
Elektrisola Typical Value	260°C	230°C
30 AWG: acc to NEMA MW1000, 3.5		
Elektrisola Typical Value	250°C	220°C

to be used as a guideline only

Electrical Values

Product Code	AB15	ABN15
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Product Code	CBP15	FS15
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Product Code	FSP15	HS15
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Product Code	HSP15	FSP18
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Product Code	HSP18	FS18
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Product Code	HS18	FS20
Breakdown voltage for Type 1 wires (at 20° C, 35% humidity)		
44 AWG single: Elektrisola Typical Value	160 V/µm	160 V/µm
30 AWG single: Elektrisola Typical Value	120 V/µm	120 V/µm

to be used as a guideline only

Mechanical Values

Product Code	AB15	ABN15
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Product Code	CBP15	FS15
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Product Code	FSP15	HS15
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Product Code	HSP15	FSP18
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Product Code	HSP18	FS18
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Product Code	HS18	FS20
Elongation for Type 1 wires		
44 AWG single: acc to NEMA MW1000, 3.4	≥ 14%	≥ 14%
Elektrisola Typical Value	23%	23%
30 AWG single: acc to NEMA MW1000, 3.4	≥ 25%	≥ 25%
Elektrisola Typical Value	40%	40%
Tensile Strength for Type 1 wires		
Elektrisola Typical Value	57 cN	57 cN
Elektrisola Typical Value	1370 cN	1370 cN

to be used as a guideline only

Bonding of Wire

Product Code	AB15	ABN15
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	limited	limited
Recommended Solvent	ethanol/ methanol	ethanol/ methanol
Recommended Bonding Temp	110 - 140°C	110 - 140°C
Resoftening Temp	≥100°C	≥100°C

to be used as a guideline only

Product Code	CBP15	FS15
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	suitable	suitable
Recommended Solvent	ethanol/ methanol	ethanol/ methanol
Recommended Bonding Temp	110 - 140°C	140 - 170°C
Resoftening Temp	≥100°C	≥140°C

to be used as a guideline only

Product Code	FSP15	HS15
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	suitable	Not suitable
Recommended Solvent	ethanol/ methanol	N/A
Recommended Bonding Temp	140 - 170°C	140 - 170°C
Resoftening Temp	≥155°C	≥155°C

to be used as a guideline only

Product Code	HSP15	FSP18
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	Not suitable	suitable
Recommended Solvent	N/A	ethanol/ methanol
Recommended Bonding Temp	140 - 170°C	150 - 190°C
Resoftening Temp	≥155°C	≥170°C

to be used as a guideline only

Product Code	HSP18	FS18
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	Not suitable	limited
Recommended Solvent	N/A	ethanol/ methanol
Recommended Bonding Temp	150 - 190°C	160 - 190°C
Resoftening Temp	≥170°C	≥180°C

to be used as a guideline only

Product Code	HS18	FS20
Hot Air Bonding	58 – 35 AWG	58 – 35 AWG
Oven Bonding	38 – 24 AWG	38 – 24 AWG
Resistance Bonding	38 – 24 AWG	38 – 24 AWG
Solvent Bonding	Not suitable	limited
Recommended Solvent	N/A	ethanol/ methanol
Recommended Bonding Temp	160 - 190°C	200 - 230°C
Resoftening Temp	≥180°C	≥200°C

to be used as a guideline only

Solderability

Product Code	AB15	ABN15
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13	3.0s/390°C	3.0s/390°C
Elektrisola Typical Value	0.8s/390°C	1.0s/390°C
Elektrisola Typical Value	1.3s/370°C	
30 AWG single: acc to NEMA MW1000, 3.13	4.0s/390°C	4.0s/390°C
Elektrisola Typical Value	1.4s/390°C	1.5s/390°C
Elektrisola Typical Value	2.8s/370°C	

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Product Code	CBP15	FS15
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13	3.0s/390°C	3.0s/390°C
Elektrisola Typical Value	0.8s/390°C	0.4s/390°C
Elektrisola Typical Value	1.3s/370°C	0.5s/370°C
30 AWG single: acc to NEMA MW1000, 3.13	4.0s/390°C	4.0s/390°C
Elektrisola Typical Value	1.4s/390°C	0.7s/390°C
Elektrisola Typical Value	2.8s/370°C	1.2s/370°C

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Product Code	FSP15	HS15
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13	3.0s/390°C	3.0s/390°C
Elektrisola Typical Value	0.4s/390°C	0.4s/390°C
Elektrisola Typical Value	0.5s/370°C	0.5s/370°C
30 AWG single: acc to NEMA MW1000, 3.13	4.0s/390°C	4.0s/390°C
Elektrisola Typical Value	0.7s/390°C	0.7s/390°C
Elektrisola Typical Value	1.2s/370°C	1.2s/370°C

to be used as a guideline only

Product Code	HSP15	FSP18
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13	3.0s/390°C	
Elektrisola Typical Value	0.4s/390°C	0.7s/390°C
Elektrisola Typical Value	0.5s/370°C	1.0s/370°C
30 AWG single: acc to NEMA MW1000, 3.13	4.0s/390°C	
Elektrisola Typical Value	0.7s/390°C	2.0s/390°C
Elektrisola Typical Value	1.2s/370°C	2.8s/370°C

to be used as a guideline only

Product Code	HSP18	FS18
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13		
Elektrisola Typical Value	0.7s/390°C	1.6s/470°C
Elektrisola Typical Value	1.0s/370°C	
30 AWG single: acc to NEMA MW1000, 3.13		
Elektrisola Typical Value	2.0s/390°C	3.0s/470°C
Elektrisola Typical Value	2.8s/370°C	

to be used as a guideline only

Product Code	HS18	FS20
Solderability for Type 1 wires, max. seconds at °C for 44/30 AWG		
44 AWG single: acc to NEMA MW1000, 3.13		Not
Elektrisola Typical Value	1.6s/470°C	Solderable
Elektrisola Typical Value		
30 AWG single: acc to NEMA MW1000, 3.13		Not
Elektrisola Typical Value	3.0s/470°C	Solderable
Elektrisola Typical Value		

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We give thanks for Elektrisola for this information, for more information please go to http://www.elektrisola.com.

 R1.02.03.09