ARISTONCAVI

SUBMERSIBLE

ELECTRIC CABLES

ELECTRIC CABLES FOR LIQUID RESISTANCE

ARISTONCAVI

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page

THE ENERGY OF HERITAGE

Aristoncavi starts its activity in Brendola (Vicenza) in 1958 on a 1.600 sqm surface, since then it has grown up to the present 35.000 sqm due to a expansion and re-allocation of the manufacturing sites and warehouses, shared between the two production units dedicated to the manufacture of conductors and electric cables.
Today it is one of the most important independent manufacturers of rubber insulated low voltage and medium voltage (up to 45kV) cables. Aristoncavi has moreover achieved leading positions in some market segments for the “special application” cables. In the last years the company has especially invested in the technological growth, by strengthening the technical department with a particular care for the Research & Development.

HEAD QUARTER

· VICENZA, Italy

BRANCH OFFICES

· DUBAI, United Arab Emirates
· SHANGHAI, China
· SANTIAGO, Chile

IN THE WORLD

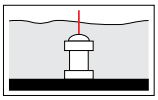
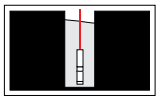
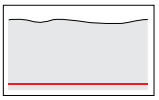
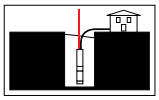
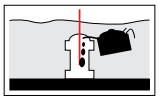
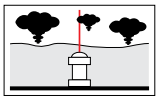
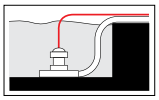
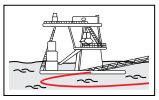
Aristoncavi, with its products, has contributed to the realization of important projects worldwide and it more then 80% exports today in more than 50 countries in the world also thanks to its branch offices: in Dubai (for the Middle East and African market), in Shanghai (for the Chinese, Australian and South Pacific market) and in Santiago de Chile (for the North and South American market).

Aristoncavi has its own innovative specific production and laboratory equipment, capable of engineering and manufacturing “high-tech” cables for different applications. The company can boast the quality of the Italian products that, in relation to the different construction characteristics and different uses can be listed in the following main families:

- reeling application
- mining application
- tunneling application
- wind towers application
- railways application
- resistant to the permanent immersion in liquids
- infrastructure

MAIN FEATURES SUMMARY

	METERS	RATED VOLTAGE	TEST VOLTAGE	WORKING TEMP. ON THE CONDUCTOR	SHORT CIRCUIT TEMP.	OIL RESISTANCE	OZONE RESISTANCE	UV RESISTANCE	BURNING BEHAVIOR
	m	V-kV	kV	°C	°C				
SUBMERSIBLE	100	450/750 - 0,6/1	2,5/4	90	250	•	•	•	•
SUBMERSIBLE S	100	450/750 - 0,6/1	2,5/4	90	250	•	•	•	•
SUBFLAT	100	0,6/1	4	90	250	•	•	•	•
SNAKEFLEX	100	0,6/1	3	90	250	•	•	•	•
NAUTILUS 500	500	0,6/1	4	90	250	•	•	•	•
NAUTILUS 500 S	500	0,6/1	4	90	250	•	•	•	•
MARINE	200	0,6/1	4	90	250				
DRINCABLE®	600	450/750 - 0,6/1	2,5/4	90	250		•		
DRINCABLE® 800	800	0,6/1	4	90	250		•		
OERRE	100	450/750	2,5	90	250	•	•	•	•
TERMALE	100	450/750	2,5	90	250	•	•	•	•
URSUS® MT SUB PLUS	300	3,6/6 6/10 8,7/15 12/20	11/17/24/29	90	250	•	•	•	•
URSUS® MT SUB-E PLUS	300	3,6/6 6/10 8,7/15 12/20	11/17/24/29	90	250	•	•	•	•
DRINCABLE® MT PLUS	300	3,6/6	11	90	250		•		

SUBMERSIBLE PUMPS	SUBMERSED PUMPS	SEA BED LAYING	DRINKING WATER	OIL LUBRICATION	HOT AND AGGRESSIVE WATER	TRAILING OPERATION IN WATER, FOR MINING AND TUNNELLING	TRAILING OPERATION OF DREDGERS AND FLOATING DOCKS
							
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■ Main use (*) See chemical resistance table p. 64/65

SUBMERSIBLE

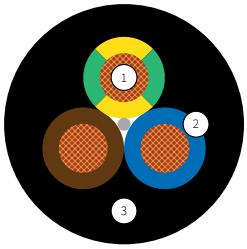
H07RN8-F / S1RN8-F
CEI EN 50525-2-21 (H07RN8-F)
Based on CEI EN 50525-2-21 (S1RN8-F)

1 **PHASE CONDUCTORS**
MATERIAL: bare copper
CONSTRUCTION: class 5 IEC 60228

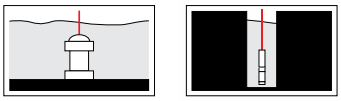
2 **INSULATION**
MATERIAL: EPR compound: EI4 quality (450/750V) acc.to EN 50363-1, 3GI3 quality (0,6/1kV) acc.to VDE 0207 part 20

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
MATERIAL: water resistant rubber compound, EM2 quality acc.to EN 50363-2-1
COLOUR: black



APPLICATION



Tough rubber unscreened cable for installation inside or outside in dry, damp or wet environments and in hazardous environments (subject to local regulations). It can be immersed in fresh and salt water to a depth of 100 meters: for flexible power supplies, suitable for submersible motors and pumps. The synthetic rubber compound is ozone, UV, sunlight and weather resistant.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	V - kV	450/750 - 0,6/1
Test voltage	kV	2,5/4
Max AC voltage	V - kV	540/900 - 0,7/1,2
Max DC voltage	kV	1,35 - 1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	100
Bending radius*	mm	Static condition: 4 x D Mobile condition: 6 x D
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

SUBMERSIBLE

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	5,7	6,6	55	23
1x2,5	1,9	6,4	7,4	70	38
1x4	2,4	7,2	8,2	95	60
1x6	2,9	8,0	9,0	130	90
1x10	3,8	9,7	10,8	190	150
1x16	4,9	10,9	12,1	260	240
1x25	6,1	12,8	14,1	360	375
1x35	7,2	14,3	15,6	480	525
1x50	8,9	16,8	18,3	670	750
1x70	10,6	18,9	20,5	890	1050
1x95	12,3	21,3	23,3	1140	1425
1x120	13,8	23,2	25,3	1440	1800
1x150	15,5	25,7	27,9	1750	2250
1x185	17,0	28,0	30,3	2140	2775
1x240	19,5	31,1	33,6	2650	3600
1x300	22,2	34,4	37,1	3380	4500
2x1	1,2	7,7	8,7	95	30
2x1,5	1,5	8,5	9,6	120	45
2x2,5	1,9	10,1	11,2	160	75
2x4	2,4	11,4	12,6	220	120
2x6	2,9	12,9	14,2	290	180
2x10	3,8	17,5	19,0	510	300
2x16	4,9	19,9	21,5	690	480
2x25	6,1	23,7	25,5	1020	750
3G1	1,2	8,4	9,5	120	45
3G1,5	1,5	9,2	10,3	140	68
3G2,5	1,9	11,0	12,2	200	113
3G4	2,4	12,4	13,7	270	180
3G6	2,9	14,1	15,4	360	270
3G10	3,8	19,1	20,7	640	450
3G16	4,9	21,8	23,5	880	720
3G25	6,1	25,8	28,0	1280	1125
3G35	7,2	28,7	31,1	1650	1575
3G50	8,9	33,8	36,4	2330	2250
3G70	10,6	38,3	41,2	3110	3150
3G95	12,3	43,7	46,8	4010	4275
3G120	13,8	46,8	50,7	4960	5400
3G150	15,5	51,9	56,1	6040	6750
3G185	17,0	56,6	61,0	7350	8325
3G240	19,5	63,9	69,0	9310	10800

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4G1	1,2	9,3	10,4	140	60
4G1,5	1,5	10,4	11,6	180	90
4G2,5	1,9	12,4	13,7	260	150
4G4	2,4	14,0	15,3	350	240
4G6	2,9	16,0	17,4	470	360
4G10	3,8	21,2	22,9	800	600
4G16	4,9	23,9	25,7	1090	960
4G25	6,1	28,8	31,2	1610	1500
4G35	7,2	31,9	34,4	2090	2100
4G50	8,9	38,2	41,1	3000	3000
4G70	10,6	43,0	46,1	3990	4200
4G95	12,3	49,2	53,2	5230	5700
4G120	13,8	53,0	57,2	6470	7200
4G150	15,5	57,9	62,7	7810	9000
4G185	17,0	63,3	68,4	9530	11100
4G240	19,5	71,3	77,1	12030	14400
5G1,5	1,5	11,5	12,7	220	113
5G2,5	1,9	13,7	15,0	310	188
5G4	2,4	15,6	17,0	430	300
5G6	2,9	17,8	19,3	570	450
5G10	3,8	23,4	25,2	970	750
5G16	4,9	26,5	28,8	1350	1200
5G25	6,1	31,9	34,4	2000	1875
7G1,5	1,5	15,8	17,1	350	158
12G1,5	1,5	18,3	19,7	510	270
18G1,5	1,5	21,5	23,6	730	405
7G2,5	1,9	18,3	19,8	490	263
12G2,5	1,9	21,4	23,5	730	450
18G2,5	1,9	25,4	27,7	1040	675
4G1,5 + 2x0,75	1,5/1,1	13,7	15,8	290	90
4G2,5 + 2x0,75	1,9/1,1	15,9	18,2	400	150
7G1,5 + 3x0,50	1,5/0,8	15,1	17,3	380	158
7G1,5 + 3x0,75	1,5/1,1	15,1	17,3	390	158
7G2,5 + 3x0,50	1,9/0,8	17,7	20,1	520	263
7G2,5 + 3x0,75	1,9/1,1	17,7	20,1	530	263

SUBMERSIBLE S

S07RC4N8-F / S1RC4N8-F
Based on CEI EN 50525-2-21

1 **PHASE CONDUCTORS**
MATERIAL: bare copper
CONSTRUCTION: class 5 IEC 60228

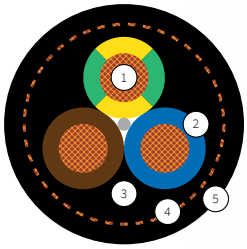
2 **INSULATION**
MATERIAL: EPR compound: EI4 quality (450/750V) acc.to EN 50363-1, 3GI3 quality (0,6/1kV) acc.to VDE 0207 part 20

CORES IDENTIFICATION
According to HD 308

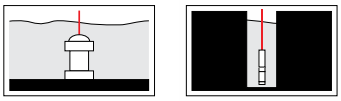
3 **INNER SHEATH**
MATERIAL: rubber compound

4 **SCREEN**
MATERIAL: bare copper braid

5 **OUTER SHEATH**
MATERIAL: water resistant rubber compound, EM2 quality acc.to EN 50363-2-1
COLOUR: black



APPLICATION



Tough rubber screened cable for installation inside or outside in dry, damp or wet environments and in hazardous environments (subject to local regulations). It can be immersed in fresh and salt water to a depth of 100 meters: for flexible power supplies, suitable for submersible motors and pumps. The synthetic rubber compound is ozone, UV, sunlight and weather resistant.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	V - kV	450/750 - 0,6/1
Test voltage	kV	2,5/4
Max AC voltage	V - kV	540/900 - 0,7/1,2
Max DC voltage	kV	1,35 - 1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25, Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	100
Bending radius*	mm	14 x D
Maximum tensile load	N/mm²	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G1,5/1,5KON	1,5	12,5	13,1	250	68
3G2,5/2,5KON	1,9	14,3	14,9	330	113
3G4/4KON	2,4	15,8	16,4	420	180
3G6/6KON	2,9	17,8	18,4	570	270
3G10/10KON	3,8	20,8	21,9	830	450
3G16/16KON	4,9	23,7	24,8	1140	720
3x25 + 3x16/3 + KON	6,1	29,6	30,8	1790	1125
3x35 + 3x16/3 + KON	7,2	31,5	32,7	2150	1575
3x50 + 3x25/3 + KON	8,9	37,6	38,8	3070	2250
3x70 + 3x35/3 + KON	10,6	42,3	44,0	4100	3150
3x95 + 3x50/3 + KON	12,3	45,6	47,3	4910	4275
3x120 + 3x70/3 + KON	13,8	51,6	53,4	6350	5400

SUBFLAT

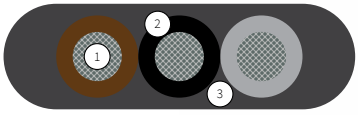
S1BNH2-F
Based on CEI EN 50525-2-21

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

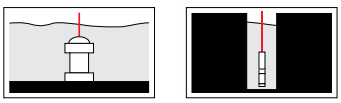
2 **INSULATION**
MATERIAL: EPR compound, 3GI3 quality according to VDE 0207 part 20

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
MATERIAL: water resistant rubber compound, EM2 quality
acc.to EN 50363-2-1
COLOUR: black



APPLICATION



Tough rubber unscreened 0.6/1kV flat cable for installation inside or outside in dry, damp or wet environments and in hazardous environments (subject to local regulations). It can be immersed in fresh and salt water to a depth of 300 meters: for flexible power supplies, suitable for submersible motors and pumps. The synthetic rubber compound is ozone, UV, sunlight and weather resistant.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	0,6/1
Test voltage	kV	4
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	300
Bending radius*	FLAT mm	3 x H (for H ≤ 12 mm) 4 x H (for H > 12 mm)
Maximum tensile load	N/mm^2	15

* (H = height)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

SUBFLAT

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN HEIGHT mm	MAX HEIGHT mm	MIN WIDTH mm	MAX WIDTH mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G4	2,4	7,0	8,0	15,5	16,5	260	180
3G6	2,9	7,5	8,5	17,5	18,5	330	270
3G10	3,8	10,3	11,0	23,1	24,1	550	450
3G16	4,9	12,2	13,2	28,0	29,5	820	720
3G25	6,1	14,2	15,2	33,0	34,5	1180	1125
3G35	7,2	16,0	17,5	37,0	38,7	1560	1575
3G50	8,9	18,5	20,0	44,1	45,8	2190	2250
3G70	10,6	20,5	22,0	50,5	52,5	2890	3150
3G95	12,3	23,1	23,9	57,1	57,9	3610	4275
3G120	14,2	25,1	25,9	62,1	62,9	4420	5400
3G150	15,5	26,8	27,6	67,2	68,0	5370	6750
3G185	17,0	28,6	29,4	72,6	73,4	6440	8325

CORES X CROSS SECTION	CONDUCTOR Ø	MIN HEIGHT	MAX HEIGHT	MIN WIDTH	MAX WIDTH	APPROX WEIGHT	MAX TENSILE LOAD
Nr x mm²	mm	mm	mm	mm	mm	kg/km	N
4G4	2,4	8,0	9,0	23,0	24,0	400	240
4G6	2,9	8,5	9,5	24,5	25,5	490	360
4G10	3,8	10,0	11,0	29,5	30,5	710	600
4G16	4,9	12,0	13,0	34,5	35,5	1040	960
4G25	6,1	15,8	17,2	42,1	43,5	1660	1500
4G35	7,2	18,6	19,4	48,6	49,8	2190	2100
4G50	8,9	19,4	20,2	56,8	57,6	2880	3000
4G70	10,6	24,0	24,8	65,4	66,6	4060	4200
4G95	12,3	25,6	26,4	73,0	74,2	5050	5700
4G120	14,2	24,3	25,1	73,8	75,0	5580	7200

SNAKEFLEX

NSSHÖU O/J
DIN VDE 0250 Part 812 approved

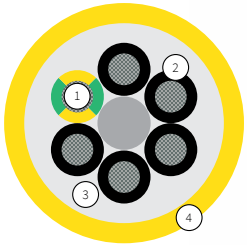
1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228)

2 **INSULATION**
MATERIAL: 3GI3 quality rubber compound, according to VDE 0207 Part 20
NOMINAL THICKNESS: according to VDE 0250 Part 812

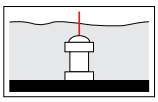
CORES IDENTIFICATION
According to VDE 0293 Part 308 (HD 308)

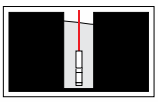
3 **INNER SHEATH**
MATERIAL: rubber compound GM1b quality,
according to VDE 0207 Part 21

4 **OUTER SHEATH**
MATERIAL: rubber compound 5GM5 quality,
according to VDE 0207 Part 21
COLOUR: yellow



APPLICATION





Heavy duty, flame retardant, abrasion, notch, tear, oils and fats resistant flexible cable for aggressive environments. Snakeflex is suitable for installation inside or outside in dry, damp or wet environments and in hazardous environments (subject to local regulations). It can be immersed in fresh water, salt water, waste water, storm water, oily water and sewage contaminated water to a depth of 100 meters. For power supplies and controlling in mines, quarries, industrial plants, agricultural applications and in general where mechanical stress and abrasion is likely.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	0,6/1
Test voltage	kV	3
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	100
Bending radius*	mm	Static condition: 4 x D Mobile condition: 5 x D
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

SNAKEFLEX

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	6,3	7,0	60	23
1x2,5	1,9	7,0	7,7	75	38
1x4	2,4	7,6	8,3	95	60
1x6	2,9	8,2	8,9	120	90
1x10	3,8	9,5	10,2	180	150
1x16	4,9	10,5	11,2	245	240
1x25	6,1	13,0	13,7	375	375
1x35	7,2	14,1	14,8	480	525
1x50	8,9	16,2	16,9	660	750
1x70	10,6	18,3	19,0	875	1050
1x95	12,3	20,5	21,7	1150	1425
1x120	14,2	22,8	24,0	1430	1800
1x150	15,5	25,0	26,2	1750	2250
1x185	17	28,2	29,4	2180	2775
1x240	19,5	31,1	32,3	2770	3600
1x300	22,2	34,9	36,1	3510	4500
2x1,5	1,5	11,2	11,8	170	45
2x2,5	1,9	12,5	13,1	220	75
2x4	2,4	14,9	15,5	320	120
2x6	2,9	16,0	16,6	385	180
2x10	3,8	19,3	19,9	580	300
2x16	4,9	21,1	22,2	765	480
2x25	6,1	25,4	26,5	1150	750
3x1,5	1,5	11,7	12,3	190	68
3x2,5	1,9	13,1	13,7	255	113
3x4	2,4	15,6	16,2	375	180
3x6	2,9	16,8	17,4	465	270
3x10	3,8	20,2	21,3	710	450
3x16	4,9	22,3	23,4	930	720
3x25	6,1	26,9	28,0	1390	1125
3x35	7,2	30,2	31,4	1880	1575
3x50	8,9	35,8	37,0	2500	2250
3x70	10,6	39,3	40,5	3460	3150
3x95	12,3	45,7	47,4	4570	4275
3x120	14,2	48,2	49,9	5220	5400
3x150	15,5	52,6	54,4	6460	6750
3x185	17	58,7	61,0	7980	8325

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4x1,5	1,5	12,5	13,1	225	90
4x2,5	1,9	15,3	15,9	350	150
4x4	2,4	16,7	17,3	440	240
4x6	2,9	18,1	18,7	550	360
4x10	3,8	21,9	23,0	860	600
4x16	4,9	25,2	26,3	1210	960
4x25	6,1	30,6	31,8	1810	1500
4x35	7,2	32,8	34,0	2330	2100
4x50	8,9	39,0	40,2	3300	3000
4x70	10,6	42,8	44,5	4300	4200
4x95	12,3	49,9	51,7	5680	5700
4x120	14,2	55,6	57,4	6820	7200
4x150	15,5	60,6	62,9	8270	9000
4x185	17	67,4	69,7	10350	11100
5x1,5	1,5	13,4	14,0	270	113
5x2,5	1,9	16,4	17,0	410	188
5x4	2,4	18,0	18,6	525	300
5x6	2,9	20,3	21,4	715	450
5x10	3,8	23,7	24,8	1040	750
5x16	4,9	27,3	28,4	1470	1200
5x25	6,1	33,2	34,4	2220	1875
7x1,5	1,5	16,9	17,5	400	158
12x1,5	1,5	19,6	20,2	540	270
18x1,5	1,5	22,2	23,3	750	405
7x2,5	1,9	19,2	19,8	560	263
12x2,5	1,9	22,3	23,4	790	450
18x2,5	1,9	26,5	27,6	1110	675
4x1,5 + 2x0,75	1,5 / 1	13,8	16,0	295	90
4x2,5 + 2x0,75	1,9 / 1	16,8	19,2	440	150
7x1,5 + 3x0,50	1,5 / 0,8	16,3	18,6	410	158
7x1,5 + 3x0,75	1,5 / 1	16,3	18,6	400	158
7x2,5 + 3x0,50	1,9 / 0,8	18,5	21,0	540	263
7x2,5 + 3x0,75	1,9 / 1	18,5	21,0	545	263

NAUTILUS 500

NAUTILUS 500 0,6/1kV
Based on CEI EN 50525-2-21

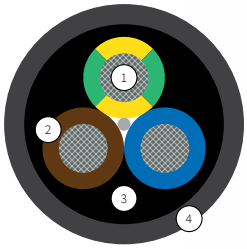
1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

2 **INSULATION**
MATERIAL: EPR compound, EI7 quality according to EN 50363-1 and 3GI3 quality according to VDE 0207 part 20

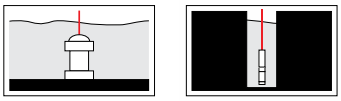
CORES IDENTIFICATION
According to HD 308

3 **INNER SHEATH**
MATERIAL: EPDM rubber compound

4 **OUTER SHEATH**
MATERIAL: water resistant CPE based rubber compound
COLOUR: black



APPLICATION



NAUTILUS 500 is a 0.6/1kV flexible cable suitable for permanent immersion to a depth of 500 meters in fresh, salt and polluted water where mobile laying is needed like power tools, submersible pumps etc. Available with steel armour for under-water power transmission in a fixed installation. The synthetic rubber compound is ozone, UV, sunlight and weather resistant.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	0,6/1
Test voltage	kV	4
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

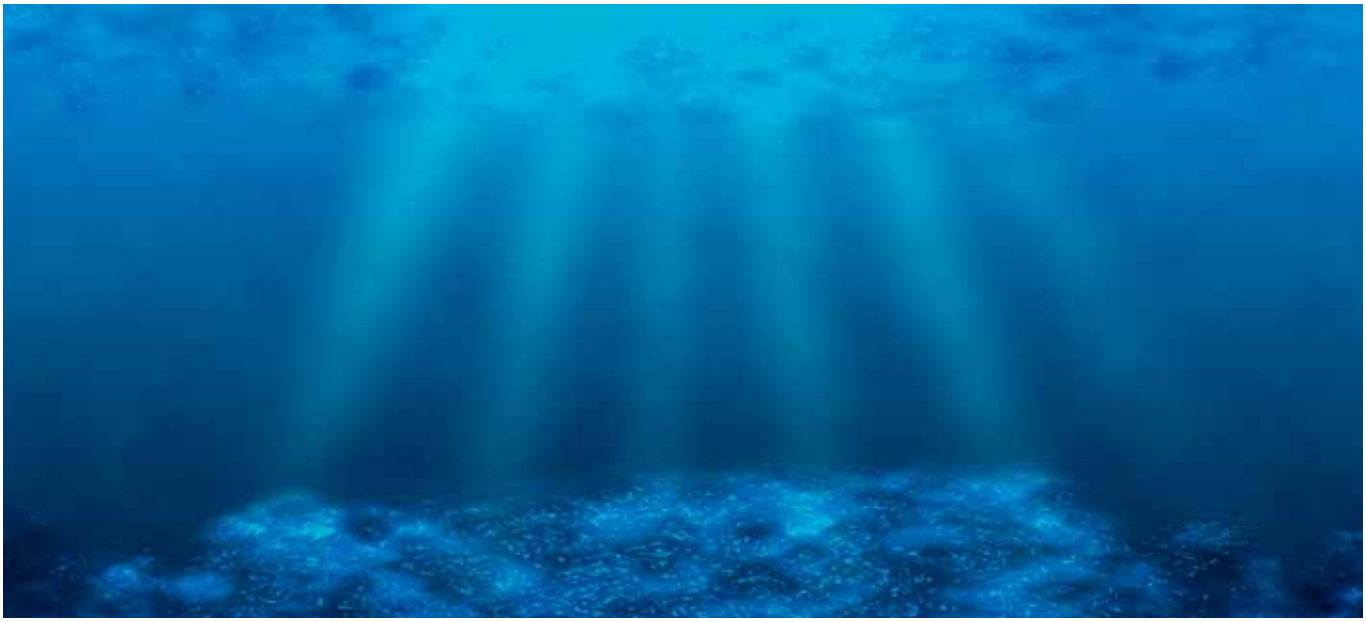
MECHANICAL WORKING DATA

Maximum water depth	m	500
Bending radius*	mm	Static condition: 4 x D Mobile condition: 6 x D
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2



NAUTILUS 500

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	5,7	6,6	50	23
1x2,5	1,9	6,4	7,4	70	38
1x4	2,4	7,2	8,2	90	60
1x6	2,9	8,0	9,0	120	90
1x10	3,8	9,7	10,8	180	150
1x16	4,9	10,9	12,1	240	240
1x25	6,1	12,8	14,1	350	375
1x35	7,2	14,3	15,6	460	525
1x50	8,9	16,8	18,3	640	750
1x70	10,6	18,9	20,5	860	1050
1x95	12,3	21,3	23,3	1120	1425
1x120	14,2	23,7	25,8	1390	1800
1x150	15,5	25,7	27,9	1700	2250
1x185	17,0	28,0	30,3	2050	2775
1x240	19,5	31,1	33,6	2570	3600
1x300	22,2	34,4	37,1	3200	4500
2x1	1,2	7,7	8,7	90	30
2x1,5	1,5	8,5	9,6	110	45
2x2,5	1,9	10,1	11,2	160	75
2x4	2,4	11,4	12,6	210	120
2x6	2,9	12,9	14,2	290	180
2x10	3,8	17,5	19,0	490	300
2x16	4,9	19,9	21,5	680	480
2x25	6,1	23,7	25,5	1000	750
3G1	1,2	8,4	9,5	110	45
3G1,5	1,5	9,2	10,3	140	68
3G2,5	1,9	11,0	12,2	200	113
3G4	2,4	12,4	13,7	270	180
3G6	2,9	14,1	15,4	360	270
3G10	3,8	19,1	20,7	620	450
3G16	4,9	21,8	23,5	870	720
3G25	6,1	25,8	28,0	1260	1125
3G35	7,2	28,7	31,1	1640	1575
3G50	8,9	33,8	36,4	2310	2250
3G70	10,6	38,3	41,2	3080	3150
3G95	12,3	43,7	46,8	3980	4275
3G120	14,2	47,8	51,8	4930	5400
3G150	15,5	51,9	56,1	6020	6750
3G185	17,0	56,6	61,0	7270	8325
3G240	19,5	63,9	69,0	9260	10800

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4G1	1,2	9,3	10,4	140	60
4G1,5	1,5	10,4	11,6	180	90
4G2,5	1,9	12,4	13,7	260	150
4G4	2,4	14,0	15,3	350	240
4G6	2,9	16,0	17,4	470	360
4G10	3,8	21,2	22,9	790	600
4G16	4,9	23,9	25,7	1070	960
4G25	6,1	28,8	31,2	1590	1500
4G35	7,2	31,9	34,4	2060	2100
4G50	8,9	38,2	41,1	2970	3000
4G70	10,6	43,0	46,1	3960	4200
4G95	12,3	49,2	53,2	5200	5700
4G120	14,2	54,0	58,3	6440	7200
4G150	15,5	57,9	62,7	7770	9000
4G185	17,0	63,3	68,4	9490	11100
4G240	19,5	71,3	77,1	11990	14400
5G1,5	1,5	11,5	12,7	220	113
5G2,5	1,9	13,7	15,0	300	188
5G4	2,4	15,6	17,0	420	300
5G6	2,9	17,8	19,3	560	450
5G10	3,8	23,4	25,2	950	750
5G16	4,9	26,5	28,8	1330	1200
5G25	6,1	31,9	34,4	1980	1875
7x1,5	1,5	15,8	17,1	340	158
12x1,5	1,5	18,3	19,7	490	270
18x1,5	1,5	21,5	23,6	700	405
7x2,5	1,9	18,3	19,8	490	263
12x2,5	1,9	21,4	23,5	700	450
18x2,5	1,9	25,4	27,7	1010	675

NAUTILUS 500 S

NAUTILUS 500 S 0,6/1kV
Based on CEI EN 50525-2-21

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

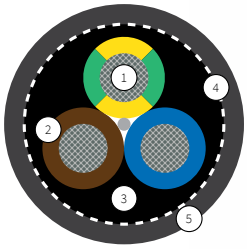
2 **INSULATION**
MATERIAL: EPR compound, EI7 quality according to EN 50363-1 and 3GI3 quality according to VDE 0207 part 20

CORES IDENTIFICATION
According to HD 308

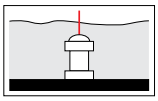
3 **INNER SHEATH**
MATERIAL: EPDM based rubber compound

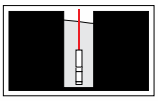
4 **SCREEN**
MATERIAL: tinned copper braid

5 **OUTER SHEATH**
MATERIAL: water resistant CPE based rubber compound
COLOUR: black



APPLICATION





Applications NAUTILUS 500S is a 0.6/1kV overall screened cable suitable for permanent immersion to a depth of 500 meters in fresh, salt and polluted water where mobile laying is needed, like power tools, submersible pumps etc. Available with steel armour for under-water power transmission in a fixed installation. The synthetic rubber compound is ozone, UV, sunlight and weather resistant.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	0,6/1
Test voltage	kV	4
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	500
Bending radius*	mm	14 x D
Maximum tensile load	N/mm²	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G1,5/1,5KON	1,5	12,5	13,1	240	68
3G2,5/2,5KON	1,9	14,3	14,9	320	113
3G4/4KON	2,4	15,8	16,4	410	180
3G6/6KON	2,9	17,8	18,4	550	270
3G10/10KON	3,8	20,8	21,9	810	450
3G16/16KON	4,9	23,7	24,8	1080	720
3x25 + 3x16/3 + KON	6,1	28,3	29,4	1640	1125
3x35 + 3x16/3 + KON	7,2	30,1	31,3	1980	1575
3x50 + 3x25/3 + KON	8,9	36,2	37,4	2860	2250
3x70 + 3x35/3 + KON	10,6	41,2	42,9	3880	3150
3x95 + 3x50/3 + KON	12,3	44,2	45,9	4660	4275
3x120 + 3x70/3 + KON	14,2	50,7	52,5	6070	5400

MARINE

RG7OEFE-0,6/1kV
Based on CEI 20-13, IEC 60502-1

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 2 IEC 60228

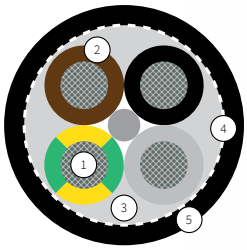
2 **INSULATION**
MATERIAL: cross-linked HEPR compound, G7 quality

CORES IDENTIFICATION
According to HD 308

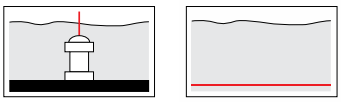
3 **INNER SHEATH**
MATERIAL: polyethylene

4 **ARMOURING**
MATERIAL: 1° galvanized steel wires, 2° spiral galvanized steel tape

5 **OUTER SHEATH**
MATERIAL: polyethylene
COLOUR: black



APPLICATION



Marine cable is a 0.6/1kV underwater cable designed to be laid on the sea bed in fixed installation. Marine cables require special designs that are able to withstand specific environmental conditions: external pressure and mechanical stress during laying operations or during service life. The specific type of armouring of this cable guarantees operations for deep-laying with an external pressure measuring up to 20 bar (approx 200 meters). The typical use is underwater power transmission in fresh or salt water. The type and quality of the material used for the outer sheath provide excellent ultraviolet resistance.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	0,6/1
Test voltage	kV	4
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	According to CEI 20-21, IEC 60287

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Static condition: - 30

MECHANICAL WORKING DATA

Maximum water depth	m	200
Bending radius*	mm	Static condition: 14 x D
Maximum tensile load	N/mm^2	75 (acc.to CEI 11-17)

* (D = outer diameter)

CHEMICAL WORKING DATA

Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

MARINE

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G25	5,9	33,5	34,7	2450	5625
3G35	6,9	36,0	37,2	2760	7875
3G50	8,0	39,3	40,5	3340	11250
3G70	9,6	46,4	48,1	4790	15750
3G95	11,4	50,7	52,5	5940	21375
3G120	13,0	56,0	57,8	7400	27000
3G150	14,3	61,4	63,7	8930	33750
3G185	16,1	67,2	69,5	10620	41625
3G240	18,4	74,6	77,0	13160	54000
4G25	5,9	36,1	37,3	2900	7500
4G35	6,9	38,7	39,9	3320	10500
4G50	8,0	44,8	46,5	4490	15000
4G70	9,6	50,2	52,0	5810	21000
4G95	11,4	55,0	56,8	7250	28500
4G120	13,0	61,7	64,0	9280	36000
4G150	14,3	66,9	69,2	10930	45000
4G185	16,1	74,1	76,5	13260	55500
4G240	18,4	81,3	84,2	16360	72000
3x35 + 25N	6,9	38,1	39,3	3190	7875
3x50 + 25N	8,0	43,2	44,9	4150	11250
3x70 + 35N	9,6	47,8	49,5	5280	15750
3x95 + 50N	11,4	52,5	54,3	6560	21375
3x120 + 70N	13,0	59,2	61,0	8490	27000
3x150 + 95N	14,3	64,2	66,5	10110	33750

DRINCABLE® 07 / DRINCABLE® 1

DRINCABLE® 450/750 V - DRINCABLE® 0,6/1 kV

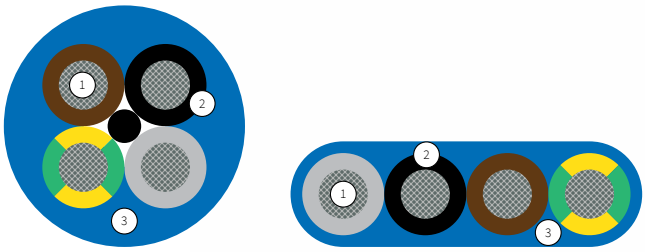
Based on CEI EN 50525-2-21
ACS - WRAS approved

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

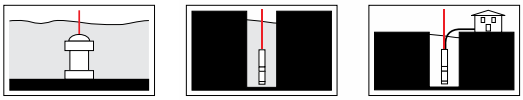
2 **INSULATION**
MATERIAL: EPR compound: EI6 quality (450/750V) acc.to EN 50363-1, 3GI3 quality (0,6/1kV) acc.to VDE 0207 part 20

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
MATERIAL: special cross-linked compound, EM6 quality (related to mechanical and thermal property) according to EN 50363-2-1
COLOUR: blue



APPLICATION



Flexible NON TOXIC, WATERPROOF and SUBMERSIBLE (up to 600 meters depth) electric cable, with special rubber insulation and outer sheath, suitable for permanent immersion in drinking water. The exceptional performance of Aristoncavi DRINCABLE® is provided by the unique and proprietary compound used for the outer sheath. The cables have successfully passed rigorous testing and are fully qualified to the British WRAS certification, the French ACS certification for direct and permanent immersion in potable water and are respecting the Italian DM 174/04. The approval protocols have verified the absence of microbial growth, the water taste, appearance, transparency and colour and the absence of any metals or toxic substances. On request DRINCABLE® is also available with a rated voltage of 0,6/1kV and in flat version (FL family). For submersible pumps for drinking water, operation and control equipment in aquariums, fish-ponds, operation of control, depuration/chlorination systems installed in water main and drinking water fountains, electrical installations in manufacturing, processing and preserving systems of drinks and foodstuff, swimming pool lightings, depuration and cleaning system.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	V - kV	450/750 - 0,6/1
Test voltage	kV	2,5 - 4
Max AC voltage	V - kV	540/900 - 0,7/1,2
Max DC voltage	kV	1,35 - 1,8
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	600
Bending radius*	ROUND mm	Static condition: 3 x D Mobile condition: 5 x D
	FLAT mm	3 x H (for H ≤ 12 mm) 4 x H (for H > 12 mm)
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Chemicals resistance	Acid and alkaline solution acc.to IEC 60811-100
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

DRINCABLE® 07 / DRINCABLE® 1

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	5,7	6,6	45	23
1x2,5	1,9	5,9	6,8	55	38
1x4	2,4	6,5	7,5	75	60
1x6	2,9	7,4	8,4	100	90
1x10	3,8	8,6	9,7	150	150
1x16	4,9	10,0	11,1	210	240
1x25	6,1	11,9	13,1	310	375
1x35	7,2	13,0	14,3	400	525
1x50	8,9	15,7	17,1	590	750
1x70	10,6	17,8	19,3	790	1050
1x95	12,3	20,7	22,7	1050	1425
1x120	14,2	22,2	24,3	1280	1800
1x150	15,5	24,0	26,1	1570	2250
1x185	17,0	28,0	30,3	1980	2775
1x240	19,5	31,1	33,6	2500	3600
1x300	22,2	34,4	37,1	3110	4500
2x1	1,2	8,0	8,9	90	30
2x1,5	1,5	9,0	10,0	110	45
2x2,5	1,9	10,7	11,8	160	75
2x4	2,4	12,1	13,2	210	120
2x6	2,9	13,6	14,8	280	180
2x10	3,8	18,3	19,7	490	300
2x16	4,9	20,5	22,6	670	480
2x25	6,1	24,4	26,7	970	750
3G1,5	1,5	9,7	10,7	140	68
3G2,5	1,9	11,5	12,6	190	113
3G4	2,4	13	14,2	260	180
3G6	2,9	14,6	15,9	350	270
3G10	3,8	19,7	21,2	610	450
3G16	4,9	22,1	24,3	840	720
3G25	6,1	26,3	28,7	1220	1125
3G35	7,2	28,8	31,3	1560	1575
3G50	8,9	33,8	36,5	2210	2250
3G70	10,6	37,9	40,8	2930	3150
3G95	12,3	43,5	47,3	3840	4275
3G120	14,2	47,5	51,5	4730	5400
3G150	15,5	51,8	56,3	5870	6750
3G185	17,0	56,5	61,2	7090	8325

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4G1,5	1,5	10,7	11,8	170	90
4G2,5	1,9	12,7	13,9	240	150
4G4	2,4	14,3	15,5	320	240
4G6	2,9	16,3	17,6	440	360
4G10	3,8	21,5	23,6	760	600
4G16	4,9	24,2	26,5	1050	960
4G25	6,1	29,2	31,7	1560	1500
4G35	7,2	32,0	34,7	2000	2100
4G50	8,9	39,2	42,2	2970	3000
4G70	10,6	42,2	45,9	3770	4200
4G95	12,3	48,9	52,9	4980	5700
4G120	14,2	53,0	57,2	6080	7200
4G150	15,5	57,9	62,7	7570	9000
4G185	17,0	63,2	68,6	9180	11100

FLAT CABLE

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN HEIGHT mm	MAX HEIGHT mm	MIN WIDTH mm	MAX WIDTH mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G4	2,4	7,0	8,0	15,5	16,5	230	180
3G6	2,9	7,5	8,5	17,5	18,5	300	270
3G10	3,8	9,9	10,9	22,9	23,9	490	450
3G16	4,9	12,0	13,0	28,0	29,0	730	720
3G25	6,1	14,0	15,0	33,0	34,0	1060	1125
3G35	7,2	16,0	17,5	37,0	38,7	1430	1575
3G50	8,9	18,5	20,0	44,1	45,8	2010	2250
3G70	10,6	20,5	22,0	50,5	52,5	2680	3150
3G95	12,3	23,1	23,9	57,1	57,9	3380	4275
3G120	14,2	25,1	25,9	62,1	62,9	4160	5400
3G150	15,5	26,8	27,6	67,2	68,0	5080	6750
3G185	17,0	28,6	29,4	72,6	73,4	6110	8325
4G4	2,4	8,0	9,0	23,0	24,0	350	240
4G6	2,9	8,5	9,5	24,5	25,5	440	360
4G10	3,8	10,0	11,0	29,5	30,5	640	600
4G16	4,9	12,0	13,0	34,5	35,5	940	960
4G25	6,1	15,8	17,2	42,1	43,5	1500	1500
4G35	7,2	18,6	19,4	48,6	49,8	1990	2100
4G50	8,9	19,4	20,2	56,8	57,6	2650	3000
4G70	10,6	24,0	24,8	65,4	66,6	3720	4200
4G95	12,3	25,6	26,4	73,0	74,2	4680	5700
4G120	14,2	24,3	25,1	73,8	75,0	5260	7200

DRINCABLE® 800

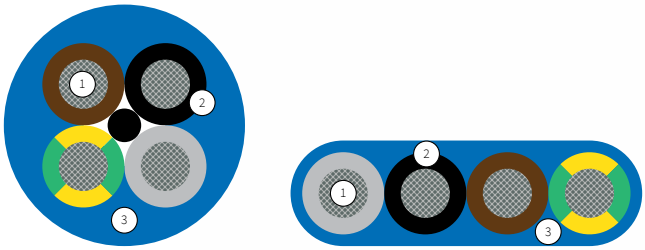
ACS - KTW - DVGW W270 - WRAS approved

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228 and VDE 0295

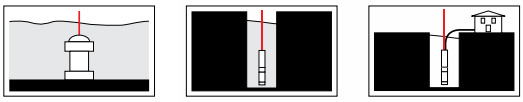
2 **INSULATION**
MATERIAL: EPR compound: EI7 quality according to EN 50363-1, 3GI3 quality according to VDE 0207 part 20, R-EP-90 quality acc. to AS/NZS 3808

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
INNER LAYER MATERIAL: special waterproof compound (if present)
OUTER LAYER MATERIAL: special cross-linked compound, 5GM3 (acc. to VDE 0207 part 21) - EM2 quality (acc.to EN 50363-2-1) for mechanical and themal properties
COLOUR: blue



APPLICATION



DRINCABLE® 800 is a flexible electrical cable no toxic, weather resistant (indoor and outdoor use), waterproof and submersible up to 800 meters, with special rubber insulation and outer sheath that makes the cable suitable for permanent immersion in drinking water. The exceptional performance of Aristoncavi DRINCABLE® 800 is provided by the unique and proprietary compound used for the outer sheath. The cable has successfully passed rigorous testing and is fully qualified for direct and permanent immersion in potable water: they are fulfilled requirements of health according to the German KTW-Recommendation, the requirements of the growth of microorganism according to German DVGW W270 Technical Standard and according to the ACS French law (Attestation de Conformité Sanitaire), moreover it also fulfilled the British Water Regulations Advisory Scheme WRAS. The cable is also respecting the Italian DM 174/04. The absence of microbial growth, the effects on water taste and appearance, the absence of any metals and toxic substances, are been tested and certified in the above protocols. The main fields of application are submersible pumps for drinking water, depuration/chlorination systems, operation and control equipment in aquarium, processing and preserving systems of drinks and foodstuff, swimming pool lightings. The cable can also be used for applications where improved chemical and abrasion resistance is required, as submersible pumps in mining application and for all the needs related the connections of electrical equipment used in presence of water. The chemical resistance of DRINCABLE® 800 makes it suitable for use even in contact with waste water, where the contact with a wide range of substances is allowed (to be checked case by case). The DRINCABLE® 800 is also available in flat version (FL family).

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	V	0,6/1
Test voltage	kV	4
Max AC voltage	kV	0,7/1,2
Max DC voltage	kV	1,8
Current rating	A	According to VDE 0298-4

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	800
Bending radius*	ROUND mm	Static condition: 3 x D Mobile condition: 5 x D
	FLAT mm	3 x H (for H ≤ 12 mm) 4 x H (for H > 12 mm)
Maximum tensile load	N/mm²	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Chemicals resistance	Acid and alkaline solution acc.to IEC 60811-100
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

DRINCABLE® 800

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	5,2	5,9	35	23
1x2,5	1,9	5,9	6,8	50	38
1x4	2,4	6,5	7,5	70	60
1x6	2,9	7,4	8,4	100	90
1x10	3,8	8,6	9,7	140	150
1x16	4,9	10,0	11,1	200	240
1x25	6,1	11,9	13,1	300	375
1x35	7,2	13,0	14,3	390	525
1x50	8,9	15,7	17,1	570	750
1x70	10,6	17,8	19,3	770	1050
1x95	12,3	20,7	22,7	1020	1425
1x120	14,2	22,2	24,3	1250	1800
1x150	15,5	24,0	26,1	1530	2250
1x185	17,0	25,7	27,7	1980	2775
1x240	19,5	28,6	31,0	2560	3600
1x300	22,2	31,7	34,1	3180	4500
1x400	25,2	35,3	37,7	4050	6000
1x500	29,5	40,5	42,9	4990	7500
3G1,5	1,5	8,8	9,8	110	68
3G2,5	1,9	10,0	11,2	180	113
3G4	2,4	11,2	12,4	225	180
3G6	2,9	12,5	13,7	295	270
3G10	3,8	15,9	17,9	480	450
3G16	4,9	18,2	20,2	680	720
3G25	6,1	22,7	24,7	995	1125
3G35	7,2	25,6	27,6	1325	1575
3G50	8,9	30,1	32,5	1890	2250
3G70	10,6	34,7	37,1	2620	3150
3G95	12,3	39,0	41,4	3225	4275
3G120	14,2	44,0	47,4	4130	5400
3G150	15,5	48,6	52,6	5115	6750
3G185	17,0	53,1	57,1	6200	8325
3G240	19,5	60,0	64,0	7850	10800
3G300	22,2	67,0	71,0	10050	13500

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4G1,5	1,5	9,6	10,8	135	90
4G2,5	1,9	11,2	12,4	200	150
4G4	2,4	12,6	13,8	270	240
4G6	2,9	14,0	15,2	380	360
4G10	3,8	17,8	19,8	630	600
4G16	4,9	20,1	22,1	870	960
4G25	6,1	25,2	27,4	1310	1500
4G35	7,2	28,1	30,7	1725	2100
4G50	8,9	33,4	36,0	2490	3000
4G70	10,6	38,5	41,1	3420	4200
4G95	12,3	43,6	47,2	4480	5700
4G120	14,2	48,8	52,4	5605	7200
4G150	15,5	54,1	58,1	6985	9000
4G185	17,0	59,6	63,6	8465	11100
4G240	19,5	66,9	70,9	10900	14400

FLAT CABLE

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN HEIGHT mm	MAX HEIGHT mm	MIN WIDTH mm	MAX WIDTH mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3G1	1,2	5,8	6,8	11,5	12,5	100	45
3G1,5	1,5	6,0	7,0	12,1	13,1	120	68
3G2,5	1,9	6,7	7,7	14,2	15,2	160	113
3G4	2,4	7,3	8,3	16,0	17,0	220	180
3G6	2,9	7,8	9,0	17,7	18,9	290	270
3G10	3,8	9,4	11,4	21,9	23,9	470	450
3G16	4,9	11,2	13,2	25,6	27,6	680	720
4G1	1,2	5,8	6,8	14,5	15,5	130	60
4G1,5	1,5	6,0	7,0	15,0	16,5	150	90
4G2,5	1,9	6,5	8,0	17,6	19,4	220	150
4G4	2,4	7,0	8,7	20,2	22,2	290	240
4G6	2,9	8,0	10,0	22,9	24,9	410	360
3x1 + 1G1	1,2	5,0	5,6	15,6	16,3	120	60
3x1,5 + 1G1,5	1,5	5,2	5,8	16,5	17,2	140	90
3x2,5 + 1G2,5	1,9	6,0	6,8	20,0	20,8	200	150
3x4 + 1G4	2,4	6,6	7,4	22,8	23,8	270	240

OERRE

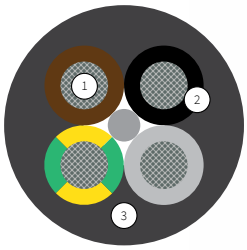
H07RN-F OR
Based on CEI EN 50525-2-21

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

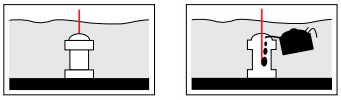
2 **INSULATION**
MATERIAL: rubber compound

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
MATERIAL: oil resistant rubber compound
COLOUR: black



APPLICATION



For power and control, the cables can be installed in dry, damp or wet environments, in polluted and oily environments and in hazardous environments (subject to local regulations).

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	V	450/750
Test voltage	kV	2,5
Max AC voltage	V	540/900
Max DC voltage	kV	1,35
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

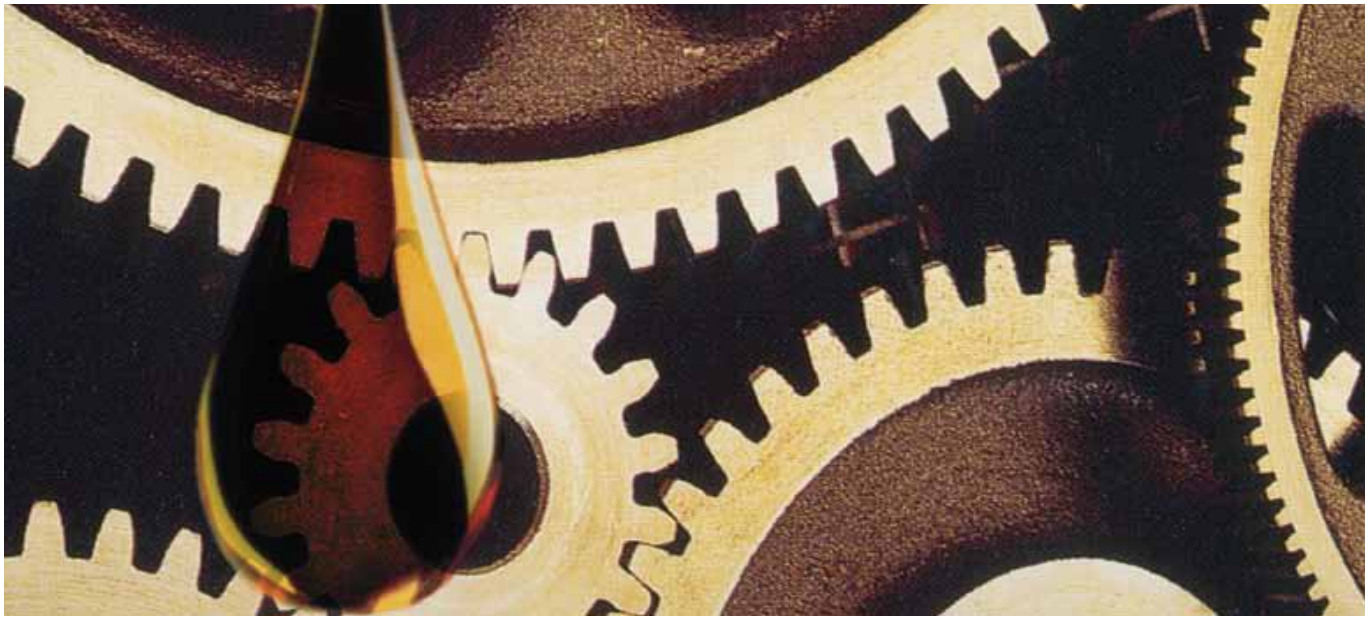
MECHANICAL WORKING DATA

Bending radius*	mm	Static condition: 4 x D Mobile condition: 6 x D
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
UV resistance	According to ISO 4892-2
Behaviour in water	Suitable for immersion in sea and brackish water
Burning behaviour	According to IEC 60332-1-2



OERRE

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
1x1,5	1,5	5,7	6,6	55	23
1x2,5	1,9	6,4	7,4	70	38
1x4	2,4	7,2	8,2	95	60
1x6	2,9	8,0	9,0	130	90
1x10	3,8	9,7	10,8	190	150
1x16	4,9	10,9	12,1	260	240
1x25	6,1	12,8	14,1	360	375
1x35	7,2	14,3	15,6	480	525
1x50	8,9	16,8	18,3	670	750
1x70	10,6	18,9	20,5	890	1050
1x95	12,3	21,3	23,3	1140	1425
1x120	14,2	23,7	25,8	1440	1800
1x150	15,5	25,7	27,9	1750	2250
1x185	17,0	28,0	30,3	2140	2775
1x240	19,5	31,1	33,6	2650	3600
1x300	22,2	34,4	37,1	3380	4500
2x1	1,2	7,7	8,7	95	30
2x1,5	1,5	8,5	9,6	120	45
2x2,5	1,9	10,1	11,2	160	75
2x4	2,4	11,4	12,6	220	120
2x6	2,9	12,9	14,2	290	180
2x10	3,8	17,5	19,0	510	300
2x16	4,9	19,9	21,5	690	480
2x25	6,1	23,7	25,5	1020	750
3G1	1,2	8,4	9,5	120	45
3G1,5	1,5	9,2	10,3	140	68
3G2,5	1,9	11,0	12,2	200	113
3G4	2,4	12,4	13,7	270	180
3G6	2,9	14,1	15,4	360	270
3G10	3,8	19,1	20,7	640	450
3G16	4,9	21,8	23,5	880	720
3G25	6,1	25,8	28,0	1280	1125
3G35	7,2	28,7	31,1	1650	1575
3G50	8,9	33,8	36,4	2330	2250
3G70	10,6	38,3	41,2	3110	3150
3G95	12,3	43,7	46,8	4010	4275
3G120	14,2	47,8	51,8	4960	5400
3G150	15,5	51,9	56,1	6040	6750
3G185	17,0	56,6	61,0	7350	8325
3G240	19,5	63,9	69,0	9310	10800

CORES X CROSS SECTION Nr x mm²	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
4G1	1,2	9,3	10,4	140	60
4G1,5	1,5	10,4	11,6	180	90
4G2,5	1,9	12,4	13,7	260	150
4G4	2,4	14,0	15,3	350	240
4G6	2,9	16,0	17,4	470	360
4G10	3,8	21,2	22,9	800	600
4G16	4,9	23,9	25,7	1090	960
4G25	6,1	28,8	31,2	1610	1500
4G35	7,2	31,9	34,4	2090	2100
4G50	8,9	38,2	41,1	3000	3000
4G70	10,6	43,0	46,1	3990	4200
4G95	12,3	49,2	53,2	5230	5700
4G120	14,2	54,0	58,3	6470	7200
4G150	15,5	57,9	62,7	7810	9000
4G185	17,0	63,3	68,4	9530	11100
4G240	19,5	71,3	77,1	12030	14400
5G1,5	1,5	11,5	12,7	220	113
5G2,5	1,9	13,7	15,0	310	188
5G4	2,4	15,6	17,0	430	300
5G6	2,9	17,8	19,3	570	450
5G10	3,8	23,4	25,2	970	750
5G16	4,9	26,5	28,8	1350	1200
5G25	6,1	31,9	34,4	2000	1875
7x1,5	1,5	15,8	17,1	350	158
12x1,5	1,5	18,3	19,7	510	270
18x1,5	1,5	21,5	23,6	730	405
7x2,5	1,9	18,3	19,8	490	263
12x2,5	1,9	21,4	23,5	730	450
18x2,5	1,9	25,4	27,7	1040	675

TERMALE

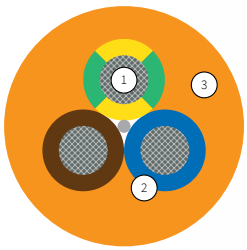
07BN2-F
Based on CEI EN 50525-2-21

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 IEC 60228

2 **INSULATION**
MATERIAL: EPR compound

CORES IDENTIFICATION
According to HD 308

3 **OUTER SHEATH**
MATERIAL: chlorinated polyethylene based elastomer
COLOUR: orange



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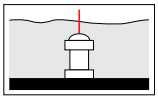
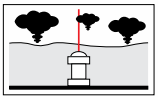




Specially designed cable for use in high temperature and chemically aggressive and thermal water to 85°C at depth up to 100 meters. For power supplies of pumps. Also recommended for use in construction yards, mining and industry.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	450/750
Test voltage	kV	2,5
Max AC voltage	kV	540/900
Max DC voltage	kV	1,35
Current rating	A	See table p. 63

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	100
Bending radius*	mm	Static condition: 4 x D Mobile condition: 6 x D
Maximum tensile load	N/mm^2	15

* (D = outer diameter)

CHEMICAL WORKING DATA

Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water
UV resistance	According to ISO 4892-2
Burning behaviour	According to IEC 60332-1-2

TERMALE

CORES X CROSS SECTION	CONDUCTOR Ø	MIN OVERALL Ø	MAX OVERALL Ø	APPROX WEIGHT	MAX TENSILE LOAD
Nr x mm²	mm	mm	mm	kg/km	N
1x1,5	1,5	5,9	6,5	55	23
1x2,5	1,9	6,6	7,1	70	38
1x4	2,4	7,4	7,9	90	60
1x6	2,9	8,2	8,8	120	90
1x10	3,8	9,9	10,4	185	150
1x16	4,9	11,1	11,7	255	240
1x25	6,1	13,0	13,6	365	375
1x35	7,2	14,5	15,0	490	525
1x50	8,9	17,0	17,5	670	750
1x70	10,6	19,1	19,7	900	1050
1x95	12,3	22,0	23,1	1190	1425
1x120	14,2	24,1	25,3	1470	1800
1x150	15,5	26,7	27,9	1870	2250
1x185	17	29,3	30,5	2260	2775
1x240	19,5	32,3	33,4	2860	3600
1x300	22,2	39,5	40,7	3510	4500
2x1	1,2	7,8	8,3	85	30
2x1,5	1,5	8,8	9,4	110	45
2x2,5	1,9	10,5	11,1	165	75
2x4	2,4	11,8	12,3	220	120
2x6	2,9	13,4	14,0	290	180
2x10	3,8	18,0	18,6	515	300
2x16	4,9	20,2	21,3	700	480
2x25	6,1	24,0	25,2	1010	750
3G1	1,2	8,5	9,1	105	45
3G1,5	1,5	9,5	10,0	135	68
3G2,5	1,9	11,3	11,9	200	113
3G4	2,4	12,8	13,4	275	180
3G6	2,9	14,4	14,9	365	270
3G10	3,8	19,4	20,0	645	450
3G16	4,9	21,8	22,9	890	720
3G25	6,1	25,8	26,9	1280	1125
3G35	7,2	28,2	29,3	1660	1575
3G50	8,9	33,2	34,4	2290	2250
3G70	10,6	37,2	38,4	3050	3150
3G95	12,3	42,7	44,4	4010	4275
3G120	14,2	46,6	48,4	4930	5400
3G150	15,5	51,8	53,6	6250	6750
3G185	17	57,0	58,8	7580	8325
3G240	19,5	63,8	66,1	9730	10800
3G300	22,2	70,6	73,0	12030	13500

URSUS® MT SUB PLUS 3,6/6 ÷ 12/20 kV

(N)TSCGEWÖU
Based on DIN VDE 0250 Part 813

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228) (*)
INSULATION MATERIAL: 3GI3 quality rubber compound, according to VDE 0207 Part 20
SEMICONDUCTIVE LAYERS: semiconductive tape over the conductor and inner and outer semiconductive rubber layer on the insulation

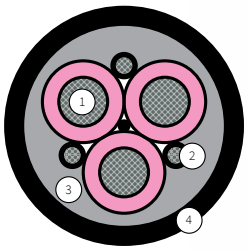
2 **EARTH CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228) (*)
COVERING MATERIAL: semiconductive layer

CENTRAL FILLER
MATERIAL: semiconductive compound on textile polyester support

CORES ASSEMBLY
ASSEMBLY: twisted cores with earth conductor split into 3 parts
SEPARATOR ON THE TWISTED ASSEMBLY: semiconductive tape around the twisted cores

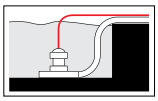
3 **INNER SHEATH**
MATERIAL: special EPR compound waterproof proofing GM1b quality, according to VDE 0207 Part 21
THICKNESS: according to VDE 0250 Part 813 (table 2)

4 **OUTER SHEATH**
MATERIAL: special CM rubber compound waterproof proofing 5GM3 quality, according to VDE 0207 Part 21
THICKNESS: according to VDE 0250 Part 813 (table 2)
COLOUR: black



* Special construction to get improved flexibility

APPLICATION



Heavy duty flexible medium voltage power cable designed for permanent immersion in fresh or salt water where mechanical stress is likely. Suitable for immersion at depths to 300 meters.
For pumps, dredgers, floating docks and for trailing operations with opencast mining equipment. The cable is unarmoured and therefore is not suitable for under-water power transmission or installation in a waterway or where mechanical damage is possible.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	3,6/6	6/10	8,7/15	12/20
Test voltage	kV	11	17	24	29
Max AC voltage	kV	4,2/7,2	6,9/12	10,4/18	13,9/24
Electrical field control		Inner and outer semiconductive layers extruded in a single-pass with the insulation			
Current rating	A	According to VDE 0298 Part 4			

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	300
Bending radius	mm	According to VDE 0298 Par t 3
Maximum tensile load*	N/mm^2	20

* Referred to the total phase conductors cross section

CHEMICAL WORKING DATA

Burning behaviour	Flame retardant according to IEC 60332-1-2
Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
UV resistance	According to ISO 4892-2
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

URSUS® MT SUB PLUS 3,6/6 ÷ 12/20 kV

VOLTAGE	CORES X CROSS SECTION	CONDUCTOR Ø	MIN OVERALL Ø	MAX OVERALL Ø	APPROX WEIGHT	MAX TENSILE LOAD
kV	Nr x mm²	mm	mm	mm	kg/km	N
3,6/6	3x25 + 3x25/3	6,9	39,9	41,6	2580	1500
3,6/6	3x35 + 3x25/3	7,8	42,9	44,6	3080	2100
3,6/6	3x50 + 3x25/3	9,3	46,0	47,7	3710	3000
3,6/6	3x70 + 3x35/3	11,1	49,8	51,6	4670	4200
3,6/6	3x95 + 3x50/3	12,7	55,8	57,6	5880	5700
3,6/6	3x120 + 3x70/3	14,5	59,6	61,4	7140	7200
3,6/6	3x150 + 3x70/3	16,7	66,0	68,3	8690	9000
3,6/6	3x185 + 3x95/3	17,6	67,9	70,2	9890	11100
6/10	3x25 + 3x25/3	6,9	39,9	42,2	2620	1500
6/10	3x35 + 3x25/3	7,8	42,9	45,2	3120	2100
6/10	3x50 + 3x25/3	9,3	46,0	48,3	3750	3000
6/10	3x70 + 3x35/3	11,1	49,8	52,2	4710	4200
6/10	3x95 + 3x50/3	12,7	55,8	58,2	5920	5700
6/10	3x120 + 3x70/3	14,5	59,6	62,1	7180	7200
6/10	3x150 + 3x70/3	16,7	66,0	69,0	8730	9000
6/10	3x185 + 3x95/3	17,6	67,9	70,9	9930	11100
8,7/15	3x25 + 3x25/3	6,9	47,3	49,0	3310	1500
8,7/15	3x35 + 3x25/3	7,8	48,8	50,6	3680	2100
8,7/15	3x50 + 3x25/3	9,3	53,7	55,5	4580	3000
8,7/15	3x70 + 3x35/3	11,1	57,5	59,3	5600	4200
8,7/15	3x95 + 3x50/3	12,7	60,8	63,1	6550	5700
8,7/15	3x120 + 3x70/3	14,5	66,4	68,7	8130	7200
8,7/15	3x150 + 3x70/3	16,7	71,0	73,4	9460	9000
8,7/15	3x185 + 3x95/3	17,6	73,1	75,5	10700	11100
12/20	3x25 + 3x25/3	6,9	52,0	53,8	3830	1500
12/20	3x35 + 3x25/3	7,8	55,2	57,0	4440	2100
12/20	3x50 + 3x25/3	9,3	58,4	60,2	5170	3000
12/20	3x70 + 3x35/3	11,1	62,1	64,4	6250	4200
12/20	3x95 + 3x50/3	12,7	67,2	69,5	7480	5700
12/20	3x120 + 3x70/3	14,5	71,0	73,4	8840	7200

URSUS® MT SUB-E PLUS 3,6/6 ÷ 12/20 kV

(N)TSCGECEWÖU
Based on DIN VDE 0250 Part 813

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228) (*)
INSULATION MATERIAL: 3GI3 quality rubber compound, according to VDE 0207 Part 20
SEMICONDUCTIVE LAYERS: semiconductive tape over the conductor and inner and outer semiconductive rubber layer on the insulation

2 **PROTECTIVE EARTH CONDUCTORS**
MATERIAL: bare copper
CONSTRUCTION: individual copper braid

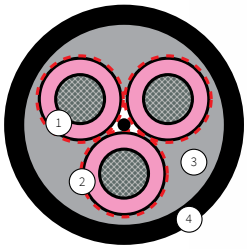
CENTRAL FILLER
MATERIAL: rubber compound on textile polyester support

CORES ASSEMBLY
ASSEMBLY: twisted cores
SEPARATOR ON THE TWISTED ASSEMBLY: semiconductive tape wound on the twisted cores

3 **INNER SHEATH**
MATERIAL: special EPR rubber compound water proofing GM1b quality, according to VDE 0207 Part 21
THICKNESS: according to VDE 0250 Part 813 (table 2)

4 **OUTER SHEATH**
MATERIAL: special CM rubber compound water proofing 5GM3 quality, according to VDE 0207 Part 21
THICKNESS: according to VDE 0250 Part 813 (table 2)
COLOUR: black

* Special construction to get improved flexibility



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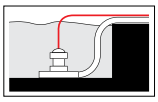

Flexible energy supply cable for use in permanent immersion in water under high mechanical stresses: pumps, dredgers, float ingdocks, etc. It is suitable for immersion up to 300 m depth and for trailing operations of opencast mining equipment.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	3,6/6	6/10	8,7/15	12/20
Test voltage	kV	11	17	24	29
Max AC voltage	kV	4,2/7,2	6,9/12	10,4/18	13,9/24
Electrical field control		Inner and outer semiconductive layers extruded in a single pass with the insulation and the screen over every conductor			
Current rating	A	According to VDE 0298 Part 4			

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	300
Bending radius	mm	According to VDE 0298 Par t 3
Maximum tensile load*	N/mm^2	15

* Referred to the total phase conductors cross section

CHEMICAL WORKING DATA

Burning behaviour	Flame retardant according to IEC 60332-1-2
Oil resistance	According to IEC 60811-404
Ozone resistance	According to IEC 60811-403
UV resistance	According to ISO 4892-2
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

URSUS® MT SUB-E PLUS 3,6/6 ÷ 12/20 kV

VOLTAGE	CORES X CROSS SECTION	CONDUCTOR Ø	MIN OVERALL Ø	MAX OVERALL Ø	APPROX WEIGHT	MAX TENSILE LOAD
kV	Nr x mm²	mm	mm	mm	kg/km	N
3,6/6	3x25 + 3x25/3e	6,8	43,4	45,1	2830	1125
3,6/6	3x35 + 3x25/3e	7,8	45,0	46,7	3180	1575
3,6/6	3x50 + 3x25/3e	9,4	48,1	49,8	3830	2250
3,6/6	3x70 + 3x35/3e	11,2	53,7	55,5	4960	3150
3,6/6	3x95 + 3x50/3e	12,7	58,4	60,2	6170	4275
3,6/6	3x120 + 3x70/3e	14,4	62,9	65,2	7540	5400
3,6/6	3x150 + 3x70/3e	16,3	69,3	71,7	9050	6750
3,6/6	3x185 + 3x95/3e	17,6	72,1	74,5	10350	8325
6/10	3x25 + 3x25/3e	6,8	43,4	45,7	2870	1125
6/10	3x35 + 3x25/3e	7,8	45,0	47,3	3220	1575
6/10	3x50 + 3x25/3e	9,4	48,1	50,4	3870	2250
6/10	3x70 + 3x35/3e	11,2	53,7	56,1	5000	3150
6/10	3x95 + 3x50/3e	12,7	58,4	60,8	6210	4275
6/10	3x120 + 3x70/3e	14,4	62,9	65,9	7580	5400
6/10	3x150 + 3x70/3e	16,3	69,3	72,4	9090	6750
6/10	3x185 + 3x95/3e	17,6	72,1	75,2	10390	8325
8,7/15	3x25 + 3x25/3e	6,8	49,4	51,2	3430	1125
8,7/15	3x35 + 3x25/3e	7,8	50,9	52,7	3800	1575
8,7/15	3x50 + 3x25/3e	9,4	55,8	57,6	4700	2250
8,7/15	3x70 + 3x35/3e	11,2	59,6	61,4	5670	3150
8,7/15	3x95 + 3x50/3e	12,7	63,3	65,6	6830	4275
8,7/15	3x120 + 3x70/3e	14,4	69,8	72,2	8520	5400
12/20	3x25 + 3x25/3e	6,8	55,9	57,7	4160	1125
12/20	3x35 + 3x25/3e	7,8	57,3	59,1	4560	1575
12/20	3x50 + 3x25/3e	9,4	60,5	62,3	5300	2250
12/20	3x70 + 3x35/3e	11,2	66,1	67,9	6580	3150
12/20	3x95 + 3x50/3e	12,7	69,8	72,2	7740	4275


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DRINCABLE® MT PLUS 3,6/6 kV

DRINCABLE® MT PLUS 3,6/6 kV

Based on DIN VDE 0250 Part 813 - ACS / WRAS / D.M. 174/04

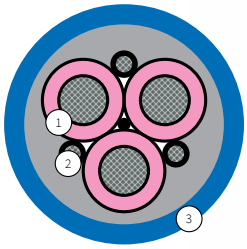
1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228) (*)
INSULATION MATERIAL: 3GI3 quality rubber compound, according to VDE 0207 Part 20
INSULATION THICKNESS: according to VDE 0250 Part 813 table 1
SEMICONDUCTIVE LAYERS: semiconductive tape over the conductor and inner and outer semiconductive rubber layer on the insulation

2 **EARTH CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228) (*)
COVERING MATERIAL: semiconductive layer

CENTRAL FILLER
MATERIAL: semiconductive compound on textile polyester support

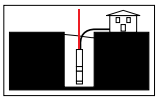
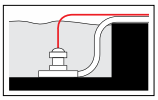
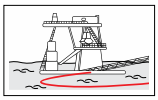
CORES ASSEMBLY
ASSEMBLY: twisted cores with earth conductor split into 3 parts
SEPARATOR ON THE TWISTED ASSEMBLY: 1,8/3 kV: semiconductive tape around the twisted cores

3 **OUTER SHEATH**
MATERIAL: special cross-linked compound, EM6 quality according to EN 50363-2-1
THICKNESS: according to VDE 0250 Part 813 (table 2)
COLOUR: blue



* Special construction to get improved flexibility

APPLICATION

Flexible energy supply cable for use in permanent immersion in drinking water, rain water, cooling water, sea water, river water and in environmentally sensitive environments. The exceptional performance of Aristoncavi DRINCABLE® MT PLUS is provided by the unique and proprietary compounds used for the outer sheath. The cables have successfully passed rigorous testing and are fully qualified to the British WRAS certification, the French ACS certification for direct and permanent immersion in potable water and are respecting the Italian DM 174/04. The approval protocols have verified the absence of microbial growth, the water taste, appearance, transparency and colour and the absence of any metals or toxic substances. Suitable for power supply to pumps, dredgers, floating docks and can be used for immersion at depths to 300 meters. Beeing the cable unarmoured, it is not suitable for under-water power transmission or installation in a waterway or where mechanical damage is possible.

ELECTRICAL WORKING DATA

Nominal rated voltage U_0 / U	kV	3,6/6
Test voltage	kV	11
Max AC voltage	kV	4,2/7,2
Electrical field control	kV	Inner and outer semiconductive layers extruded in a single-pass with the insulation
Current rating	A	According to VDE 0298 Part 4

THERMAL WORKING DATA

Maximum short circuit temperature	°C	250
Maximum working temp. on the conductor	°C	90
Minimum ambient temperature	°C	Mobile condition: - 25 Static condition: - 40

MECHANICAL WORKING DATA

Maximum water depth	m	300
Bending radius*	mm	according to VDE 0298 Part 3
Maximum tensile load	N/mm^2	15

* Referred to the total phase conductors cross section

CHEMICAL WORKING DATA

Chemicals resistance	Acid and alkaline solution acc.to IEC 60811-100
Ozone resistance	According to IEC 60811-403
Behaviour in water	Water resistance test acc.to EN 50525-2-21 (AD8 condition) and AC internal test, suitable for immersion in sea and brackish water

CORES X CROSS SECTION Nr x mm^2	CONDUCTOR Ø mm	MIN OVERALL Ø mm	MAX OVERALL Ø mm	APPROX WEIGHT kg/km	MAX TENSILE LOAD N
3x25 + 3x25/3	6,8	39,9	41,6	2580	1125
3x35 + 3x25/3	7,8	42,9	44,6	3080	1575
3x50 + 3x25/3	9,4	46,0	47,7	3710	2250
3x70 + 3x35/3	11,2	49,8	51,6	4670	3150
3x95 + 3x50/3	12,7	55,8	57,6	5870	4275
3x120 + 3x70/3	14,4	59,6	61,4	7130	5400
3x150 + 3x70/3	16,3	66,0	68,3	8690	6750
3x185 + 3x95/3	17,6	67,9	70,2	9880	8325

TECHNICAL DATA

ELECTRICAL RESISTANCE

Electrical resistance Ohm/km (according to IEC 60228 - VDE 0295)

CROSS-SECTION mm²	FLEXIBLE CONDUCTORS, RESISTANCE AT 20°C		FLEXIBLE CONDUCTORS, RESISTANCE AT 90°C		RIGID CONDUCTORS, RESISTANCE AT 20°C		RIGID CONDUCTORS, RESISTANCE AT 90°C	
	Bare copper	Tinned copper	Bare copper	Tinned copper	Bare copper	Tinned copper	Bare copper	Tinned copper
1,5	13,30	13,70	16,93	17,44	12,1	12,2	15,40	15,53
2,5	7,98	8,21	10,16	10,45	7,41	7,56	9,43	9,62
4	4,95	5,09	6,30	6,48	4,61	4,70	5,87	5,98
6	3,30	3,39	4,20	4,32	3,08	3,11	3,92	3,96
10	1,91	1,95	2,43	2,48	1,83	1,84	2,33	2,34
16	1,21	1,24	1,54	1,58	1,15	1,16	1,46	1,48
25	0,78	0,795	0,993	1,012	0,727	0,734	0,925	0,934
35	0,554	0,565	0,705	0,719	0,524	0,529	0,667	0,673
50	0,386	0,393	0,491	0,500	0,387	0,391	0,493	0,498
70	0,272	0,277	0,346	0,353	0,268	0,27	0,341	0,344
95	0,206	0,210	0,262	0,267	0,193	0,195	0,246	0,248
120	0,161	0,164	0,205	0,209	0,153	0,154	0,195	0,196
150	0,129	0,132	0,164	0,168	0,124	0,126	0,158	0,160
185	0,106	0,108	0,135	0,137	0,0991	0,100	0,126	0,127
240	0,0801	0,0817	0,102	0,104	0,0754	0,0762	0,0960	0,0970
300	0,0641	0,0654	0,0816	0,0833	0,0601	0,0607	0,0765	0,0773
400	0,0486	0,0495	0,0619	0,0630	0,0470	0,0475	0,0598	0,0605
500	0,0384	0,0391	0,0489	0,0498	0,0366	0,0369	0,0466	0,0470
630	0,0287	0,0292	0,0365	0,0372	0,0283	0,0286	0,0360	0,0364

CORRECTION FACTORS

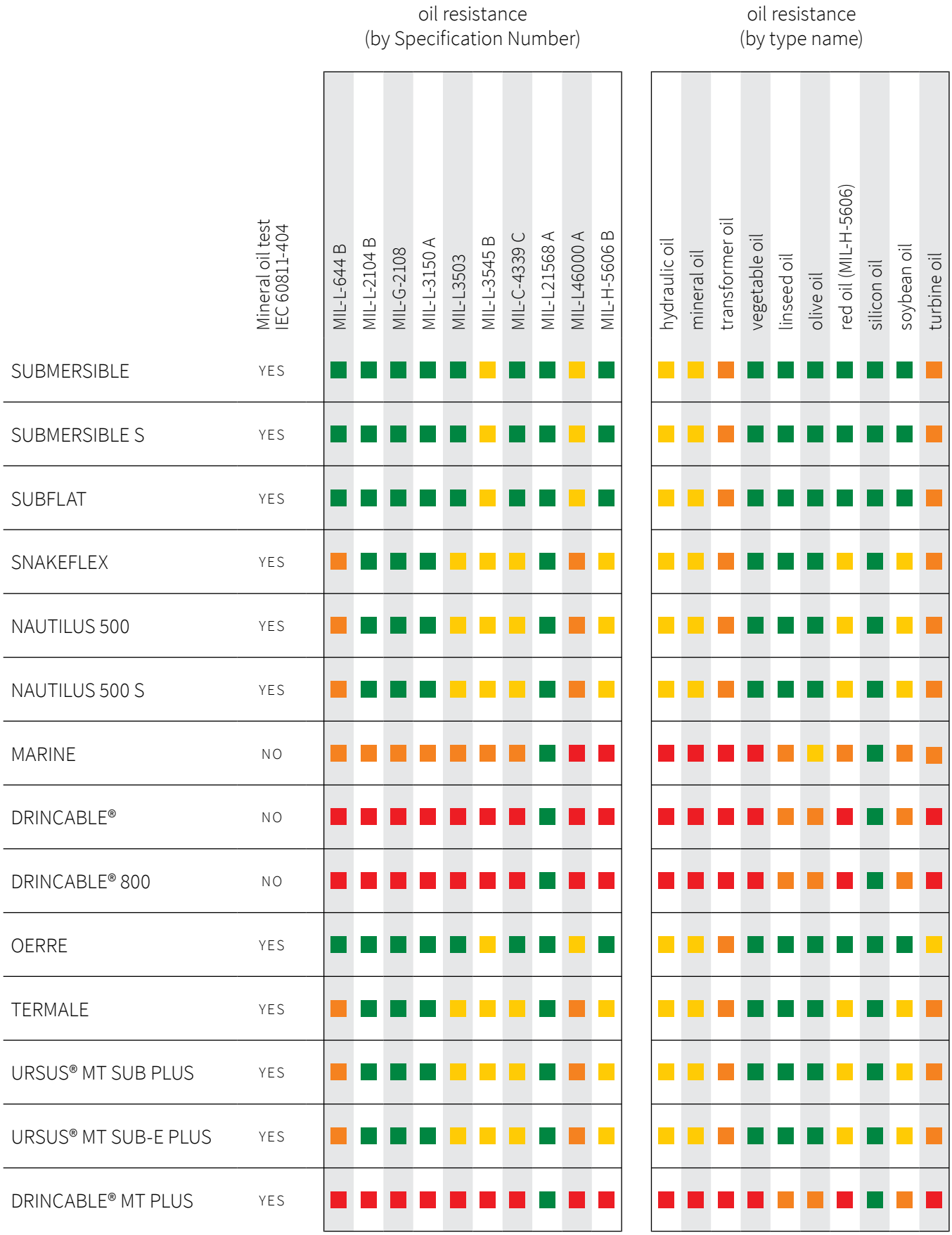
AMBIENT TEMP.(°C)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
FACTOR	1,15	1,12	1,08	1,04	1	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,5	0,41	0,29

CURRENT CARRYING CAPACITY (LOW VOLTAGE CABLES)

Conductor service temperature 90°C
Ambient air/water temperature 30°C
3 - 4 cores cable
3 cores loaded

	ROUND CABLES		FLAT CABLES		
CROSS SECTION	LAYING IN FREE AIR	LAYING IN WATER	LAYING IN FREE AIR	LAYING IN WATER	MAX SHORT CIRCUIT CURRENT (1S)
mm^2	A	A	A	A	kA
1,5	23	29	24	30	0,215
2,5	32	38	33	39	0,358
4	42	52	45	56	0,572
6	54	67	58	72	0,858
10	75	94	80	100	1,430
16	100	125	107	134	2,288
25	127	166	141	184	3,575
35	158	205	176	228	5,005
50	192	256	216	288	7,150
70	246	316	279	358	10,010
95	298	377	342	433	13,585
120	346	438	400	506	17,160
150	399	505	464	587	21,450
185	456	577	533	674	26,455
240	538	681	634	803	34,320
300	621	785	736	930	42,900

CHEMICAL RESISTANCE

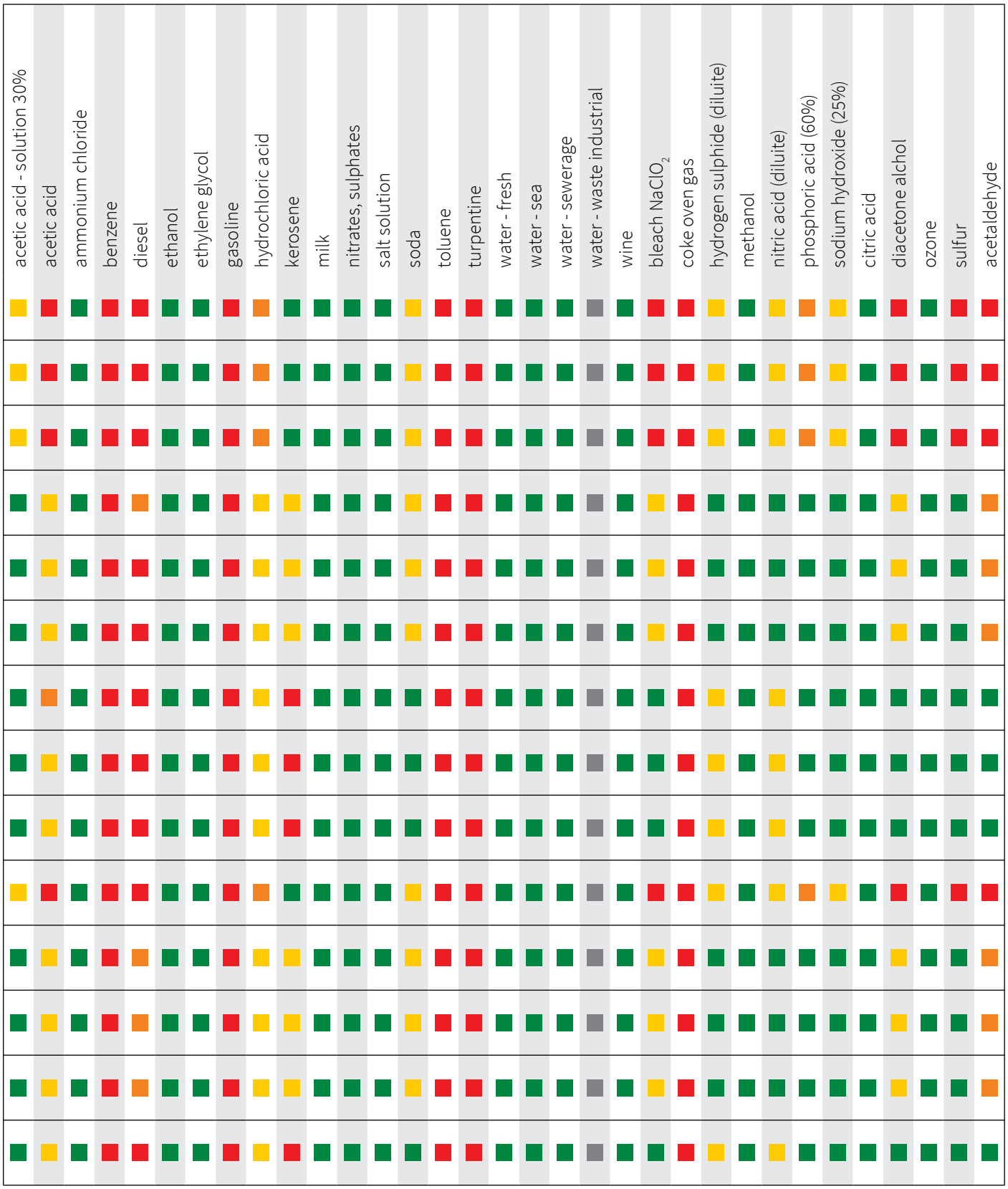


little influence on the material (suitable for use, for prolonged contact or immersion)

moderate deterioration of the characteristics (fit for use)

characteristics severe decay (use not recommended: eventually to be checked conditions and timing of contact)

other liquid resistance



not usable

to be verified in relation to the chemical main components

NOTE

CSQ: this certified that Aristoncavi S.p.A. implements a quality system in conformity with the standard UNI EN ISO 9001 to ensure quality in design, development, manufacture, selling/marketing and installation of the product.

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