

## IDENTIFICATION WIRE DATA SHEET

### SILICON RUBBER (G) - GLASS FIBER (V) - SILICON RESIN (R)

#### IDENTIFICATION

**GVR**

#### FACTORY:

- NAME ELEXA SRL

- ADDRESS VIA ALLE FABBRICHE N. 20 - 10072 CASELLE TORINESE (TO)

- MARKING

(STAMPIGLIATURA) .....

(FILO DISTINTIVO) .....

#### TYPE

ENERGY WIRE, FLEXIBLE, SILICON RUBBER INSULATION AND GLASS BRAID, COATED - NOMINAL MAX VOLTAGE 300/500V

PECULIARITIES THERMICAL PERFORMANCES: CLASS H STABLE

- WHERE USE IT HEAVY THERMICAL CONDITIONS; LIMITED DIMENSIONAL WORK CONDITIONS; HIGH THERMICAL CONCENTRATION. ELECTRICAL AD GAS COOKERS, LIGHTING, HOVENS, AUTOMATIONS, PRODUCTION MACHINERY.

- WHERE AVOID IT WEAK MECHANICAL VIBRATIONS RESISTANCE

## WIRE DESCRIPTION

ELECTRICAL CONDUCTOR WIRE , SINGLE CORE FLEXIBLE COPPER CONDUCTOR WITH SILICON INSULATING RUBBER EXTRUSION, EXTERNAL BRAID IN FIBERGLASS, SILICON RESIN IMPREGNATION THERMAL-CLASS H.  
AVAILABLE IN STANDARD TYPE (U<sub>0</sub>/u 300/500 V) OR IN LOW THICKNESS SPECIAL FEATURE (U<sub>0</sub>/U 300/300V)

### TECHNICAL DATA

MAX OPERATING VOLTAGE: 300-500V  
EXERCISE TEMPERATURE: 180 GRADES °C  
MAX TEMPERATURE: 220 GRADES °C  
MINIMUM WORKING TEMPERATURE: -50 GRADES °C  
MINIMUM RADIUS BENDING: 6 TIMES MAX ESTERNAL DIAMETER  
MAX TRACTION RESISTANCE: 50 N/mm<sup>2</sup>

### MORE INFO

REF. OUR CATALOGUE  
or  
WEB SITE [www.elexa.it](http://www.elexa.it)

### PARTS LIST

COPPER FLEXIBLE CONDUCTOR (ON REQUEST NICKEL OR STEEL)  
PRIMARY INSULATION: SILICON RUBBER COMPRESSED EXTRUSION  
SECOND INSULATION: TEXTILE FIBERGLASS BRAIDING  
COATING: SILICON RESIN, CROSSLINKED

### RANGE

STRANDING: FROM 14X0,15 TO 1121X0,50 COPPER FILAMENTS  
CROSS SECTIONS: FROM 0,25 MM<sup>2</sup> TO 240 MM<sup>2</sup>  
STANDARD COLOURS: SINGLE/LINED 12 COLOURS  
STANDARD OPERATING VOLTAGE: 300/500V OR 300/300V

## GENERAL INFORMATIONS

- GOOD CUT PERFORMANCE
- NORMAL OPERATION IN H THERMAL CLASS
- GOOD PERFORMANCE UP TO 250 °C (SHORT TIME)
- AGE MODIFICATIONS NOT DETECTABLE
- GOOD TRACTION RESISTANCE
- FIBERS IMPREGNATION BETTER THAN 98% OF AVAILABLE VOLUME

## TESTS AND REFERENCE NORMS

### LABORATORY

TEST	CHECK	METHOD	CYCLE	RESULTS
DIMENSIONAL	DIAM.SINGLE YARN AND STRAND	CEI 20-34	EVERY 100 KM	INTO STANDARD
DIELECTRIC STRENGTH	BREAKDOWN IN WATER	CEI 20-19/2	EVERY 100 KM	NO FAULTS
CONDUCTOR RESISTIVITY	OHMS RESISTANCE	CEI 20-34	EVERY 100 KM	FOLLOWING CEI 20-29
MECHANICAL	ELONGATION AT BREAK ESTRUSIONE	CEI 20-34	EVERY 100 KM	MINIMUM 200 %

### PACKAGING

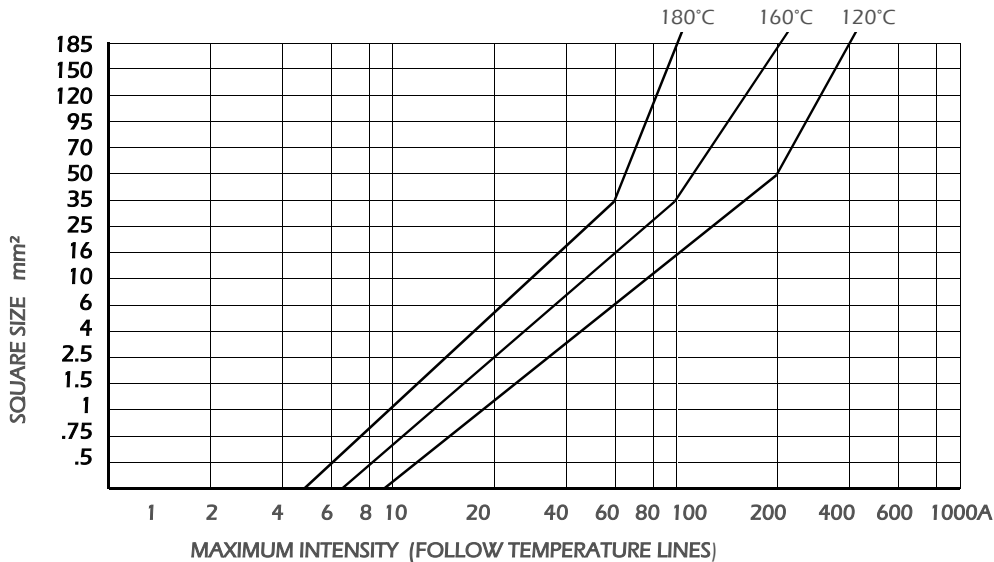
TEST	CHECK	METHOD	CYCLE	RESULTS
DIELECTRIC STRENGTH	SPARK-TESTER ON PACKAGE LINE	CEI 20-19/2	100 %	FAULTS ELIMINATION
DIMENSIONAL	DIMENSIONAL RANGE	CEI 20-34	100 %	INTO RANGE

## PHISICAL DATA SHEET

### CONDUCTOR DETAILS AND MAXIMUM TEMPERATURE IN OXIDIZING ATMOSPHERE

TIPO DI CONDUTTORE	SIGLA	TEMPERATURE MAX IN OXIDIZING ATMOSPHERE -°C	TEAR STRENGTH N/mm <sup>2</sup>	ELASTIC MOD. kN/mm <sup>2</sup>	SPECIFIC WEIGHT g/cm <sup>3</sup>	LINEAR DILATATION FACTOR X 10 <sup>-3</sup> /°C	THERMAL CONDUCT. W/(m°C)	RESISTIVITY 20°C Ω/km/mm <sup>2</sup>
BARE COPPER	Cu	150	300	130	8,89	0,0165	395	1,724
TINNED COPPER	Cu Sn	180	300	130	8,89	0,0165	395	1,752
SILVERED COPPER	Cu Ag	200	300	130	8,89	0,0165	395	1,724
NICKELED COPPER	Cu Ni	300	300	130	8,89	0,0165	395	1,760
STEEL	Fe	180	370-420	170	7,8	0,0117	73	117
STEEL INOX	AISI 304	600	500-700	200	7,9	0,016	15	819
NIKEL	Ni 99	600	720	200	8,9	0,0133	74,9	100

### MAX INTENSITY FOR SINGLE WIRE



Following the diagram you will find the **MAXIMUM INTENSITIES ADMITTED**.

Would you consider that the single yarn operating in refreshed conditions, **CAN BE SURCHARGED** up to an increased current level, that can justify his own internal heating generation.

Logically that situation has to be **DIRECTLY CHECKED AND TESTED** in working final conditions.

The heating resistance performance, can be joined from internal or external conditioning.

### INTENSITY REDUCTION ON MULTIPLE STRANDING WIRES

The maximum intensity admitted **HAS TO BE REDUCED** of a percentage following this particular diagram.

Please avoid to cross the considerations of possible internal heat generations due to surcharge. Too many factors has to be considered for safety appliances.



## ELECTROPHISICAL COMPARATION MAIN WIRE TYPES

	PPR	PVR	GS	GVR	GPR	GVS	2SVS/R	TFVS/R	NIKEL (2S or TF)
<b>COMPORTAMENTO AL TAGLIO</b> CUT & SHEARING PERFORM. COUPAGE ET DENOUAGE									
<b>FORMAZIONE DI POLVERI</b> POWDERS IN USE PROD. DE POUFRE									
<b>FISSAGGIO DEL RIVESTIMENTO</b> BRAID FIXING FIXATION DU REVETEMENT									
<b>TEMPERATURA DI ESERCIZIO</b> OPERATING TEMPERATURE TEMPERATURE DE SERVICE	-30+155°C	-30+155°C	-50+180°C	-50+200°C	-50+180°C	-50+220°C	-50+250°C	-50+300°C	-50+300°C
<b>TENSIONE DI ESERCIZIO</b> OPERATING VOLTAGE TENSION DE SERVICE	220/380V	220/380V	300/500V	300/500V	300/500V	300/500V	220V	220/380V	220/380V
<b>TENSIONE DI COLLAUDO</b> TEST VOLTAGE TENSION D'ESSAI	1,2/2KV	1,2/2 KV	2 KV	2 KV	2 KV	2 KV	1,2 KV	1,2 KV	1,2 KV
<b>TENSIONE DI PERFORAZIONE</b> BREAKDOWN VOLTAGE TENSION DE CLAQUAGE	> 4 KV	> 4 KV	~ 6 KV	~ 6 KV	~ 6 KV	~ 6 KV	~ 2,2 KV	~ 2,2 KV	~ 2,2 KV
<b>QUALITA' MECCANICHE</b> MECHANICAL PROPERTIES PROPRIETE' MECANIQUE									
<b>RESISTENZA ALL'ABRASIONE</b> ABRASION RESISTANCE RESISTANCE A L'ABRASION									
<b>RESISTENZA ALLA FIAMMA</b> FIRE RESISTANCE RESISTANCE AU FEU									
<b>RESISTENZA AGLI OLII MINERALI</b> MINERAL OEL RESISTANCE RESISTANCE AUX HUILES									
<b>FLESSIBILITA'</b> FLEXIBILITY FLEXIBILITE'									
<b>IMPERMEABILITA'</b> IMPERMEABILITY ETANCHEITE'									
<b>INVECCHIAMENTO</b> AGEING VIEILNISSEMENT									
<b>SEZIONI LAVORATE</b> mm <sup>2</sup> AVAILABLE SIZES SECTIONS DISPONIBLES	0,5-10mm	0,5-10	0,35-240	0,35-240	0,35-240	0,35-240	0,5-10	0,5-10	0,5-10
<b>COLORI</b> COLORS COLEURS	12 COL	12 COL	UNITO 8 COL	12 COL	12 COL	RIGATO 8 COL	12 COL	12 COL	12 COL