



**AUTOMOTIVE  
WIRES AND CABLES**  
FOR WIRING HARNESS



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Integrated Energy Solutions



Since our beginnings as a manufacturer of electrical components in Egypt 80 years ago, Elsewedy Electric has evolved into a global provider of energy, digital and infrastructure solutions, generating revenues of approximately 3 Billion USD annually. We operate in five key business sectors: Wire & Cable, Electrical Products, Engineering & Construction, Smart Infrastructure, and Infrastructure Investments. At the heart of our approach is an all-in-one integrated Engineering, Procurement & Construction (EPC) service which enables us to deliver even the most complex projects on time and within budget.

We are pioneers of energy management and efficiency. As part of our commitment to sustainability we have

established green energy and smart metering projects across Africa, the Middle East and Eastern Europe. A vital part of our mission is ensuring that the communities where we operate develop and flourish.

Our growth has been based on sound financials and a commitment to hiring talented individuals. As well as empowering businesses and communities, we have been a major contributor to the Egyptian, African and Middle Eastern economies.

Whichever stage you are at with your project we can help you through to completion and beyond.

## A leader in integrated energy solutions



**Integrated Energy Solutions**

- Wire & Cable
- Electrical Products
- Engineering & Construction
- Smart Infrastructure
- Infrastructure Investments



## Wire & Cable Business Line



We are a global wire and cable manufacturer with more than 40 years of experience in the industry. We pride ourselves for our superior product quality and numerous certifications. Our manufacturing capacity is close to 350k+ Tons annual total capacity located in several countries. We offer a wide range of power & special cables as well as cable accessories that are currently used in more than 100 countries worldwide.

## Global Presence



Cables & Accessories



Electrical Products



Meters



Transformers



Telecommunication



Renewable energy



Projects & Development



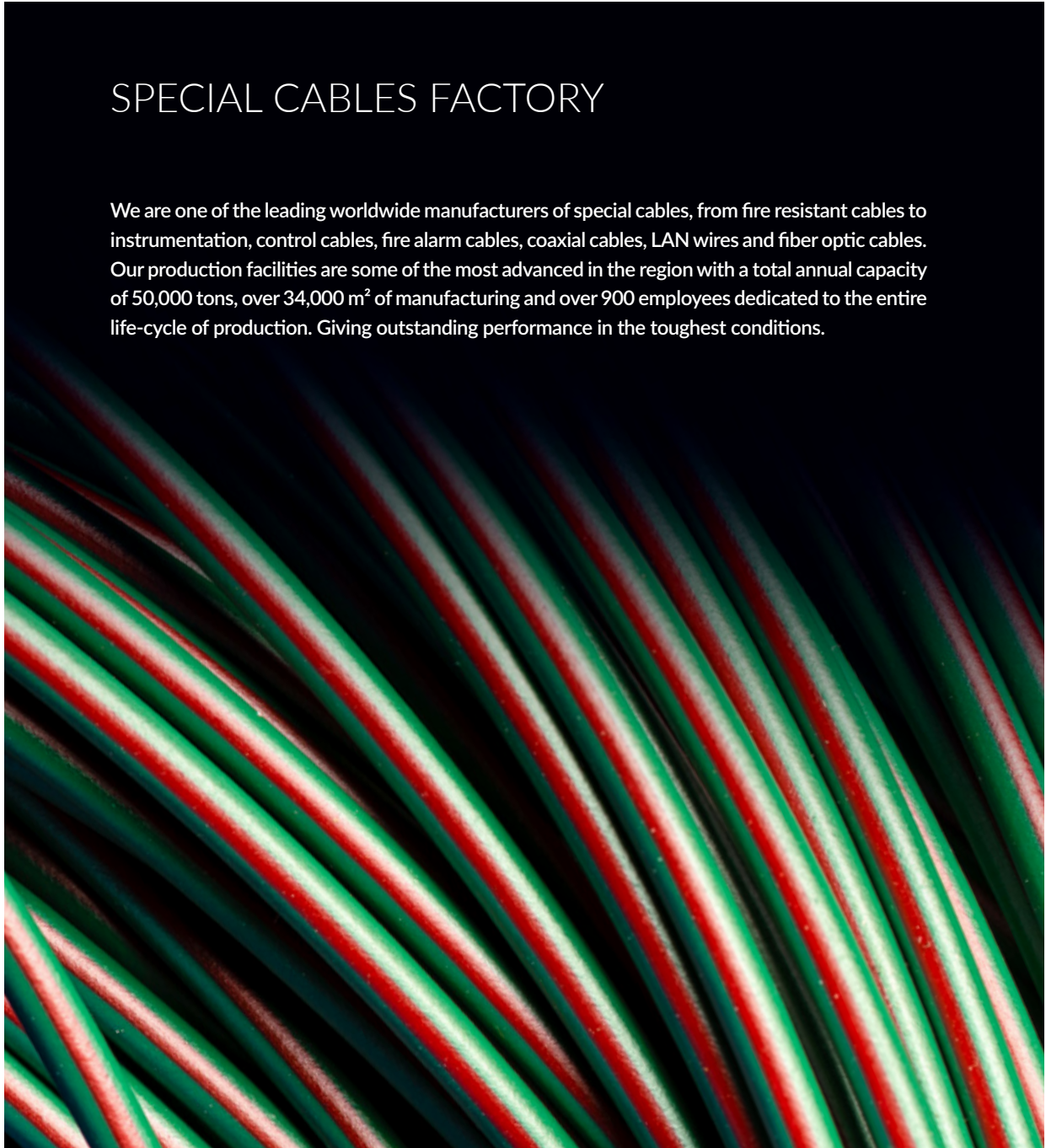
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## Our **Special Cables Factory**

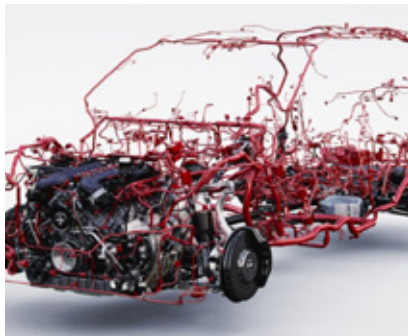
### SPECIAL CABLES FACTORY

We are one of the leading worldwide manufacturers of special cables, from fire resistant cables to instrumentation, control cables, fire alarm cables, coaxial cables, LAN wires and fiber optic cables. Our production facilities are some of the most advanced in the region with a total annual capacity of 50,000 tons, over 34,000 m<sup>2</sup> of manufacturing and over 900 employees dedicated to the entire life-cycle of production. Giving outstanding performance in the toughest conditions.



# Applications

Our wires are used in manufacturing electrical wiring harnesses for automotive and home appliances, which are used in starting, charging, lighting, signaling and instrument panels.



### Power Applications:

Multi-core automotive cables with sheath, shielded and unshielded. Lighting and wiring systems, electrical installation wiring, engine compartment etc.

### Comfort Applications:

Roof, seat, heating, ventilation & climate control systems, park assistance, consumer electronics etc.

### Control Applications:

Sensors for rain, weight and occupant recognition, fill level, lambda probe, applications with capacity and inductivity requirements etc.



### Safety Applications:

Multi-core automotive cables for airbag, belt, pre-crash, collision avoidance and closing systems, clamping protections, chassis safety, distance controllers etc.

### Truck Applications:

Multi-core automotive cables in straight and coiled version for connection cable between tractor and trailer / semi-trailer, lighting and wiring systems with ADR approval.



# Why Elsewedy Electric

## 1. Quality:

We pride ourselves in providing the highest quality cables. We are the only lab in Egypt who's accredited by ISO 17025. Each of our cable types are also approved by one or more reputable international third parties our cables are certified by UL, KEMA, VDE, BASEC, LPCB, BV, IMQ and more.

## 2. Customization & flexibility of designs:

Our R&D center offers our customers a diversified product customization portfolio. Whether in design, manufacture or products that suit special environmental conditions. We are the only cables manufacturer in middle-east with the capability to manufacture hybrid cables that include LV, Control, Signal and Fiber optic elements in one composite product.

## 3. Security and assurance:

ELsewedy always strives to give security related specifications and features the same importance as functional and performance related specifications and features. We're continually researching new security measurements to ensure we are providing the best products with the finest quality.

## 4. Flexible payment terms:

Our financial terms help our customers reach their goal. We offer a variety of payment terms that are both flexible and safe.

## 5. Heritage and experience:

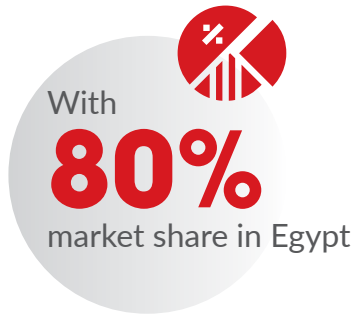
Our cable facilities have been able to maintain and grow their business in different sectors and countries. All this while ensuring a high quality product to our customers.

## 6. Wide and variable portfolio:

We offer an end to end solution to all our customers aiming to accomplish a complete cycle from scratch; starting by manufacturing cables then completing the production process to ensure a complete user experience using the latest enterprise systems and latest technologies. Now we have 5 operating business lines "Wire & Cable, Electrical Products, Engineering & Construction, Smart Infrastructure and Infrastructure Investments". This variety and versatility of products range gives us the advantage to be able to meet the client's needs.



## Why Elsewedy Electric



### 7. Agility and geographical expansion:

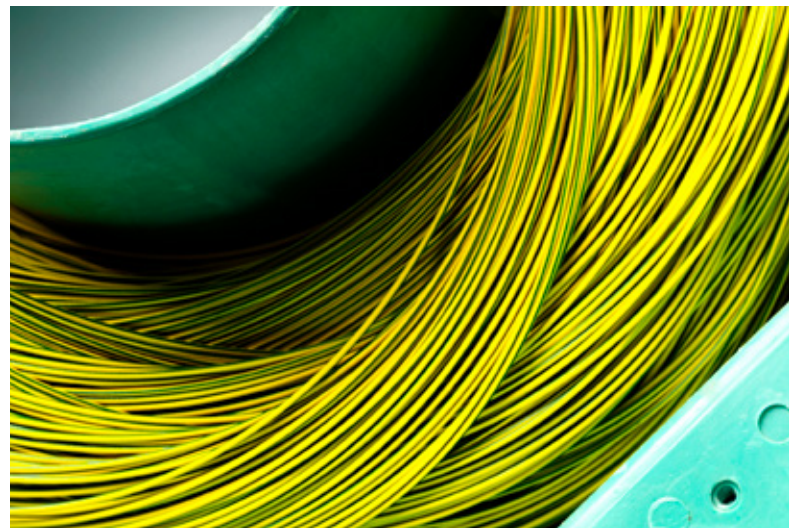
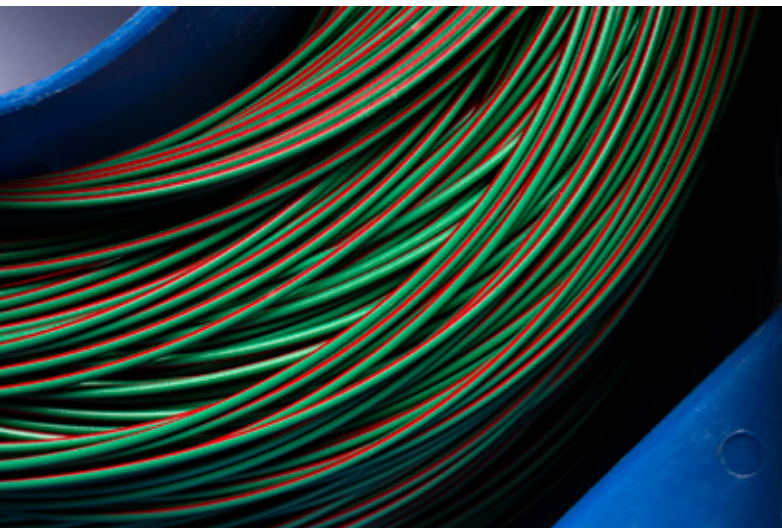
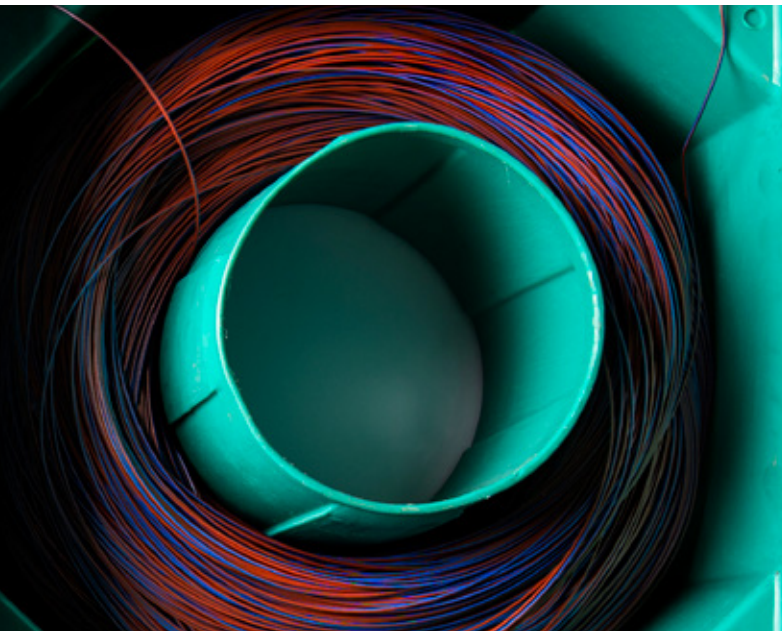
We take pride in our agile approach to Business. Since we put our customers first, we are able to serve different countries with the finest quality of cables.

### 8. Recognition:

We are recognized as the market leader and the top cable brand in Egypt and a well-recognized brand in GCC and Europe. Our clients include LEONI, THALES, DEWA, ABB, ORASCOM, SIEMENS, STC and more.

### 9. Support & customer care:

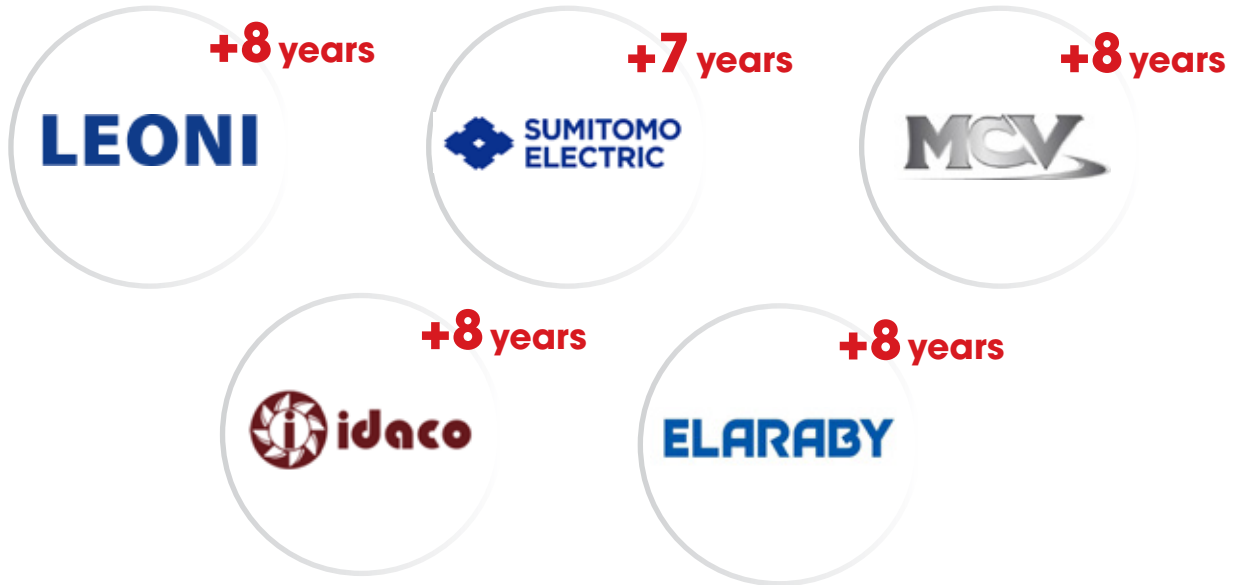
Since day one our aim is to offer exceptional customer service locally and globally through offering quality products, services and innovative solutions. Our experienced team can provide technical support to answer all customers' queries and ensure providing the right cable for your application.





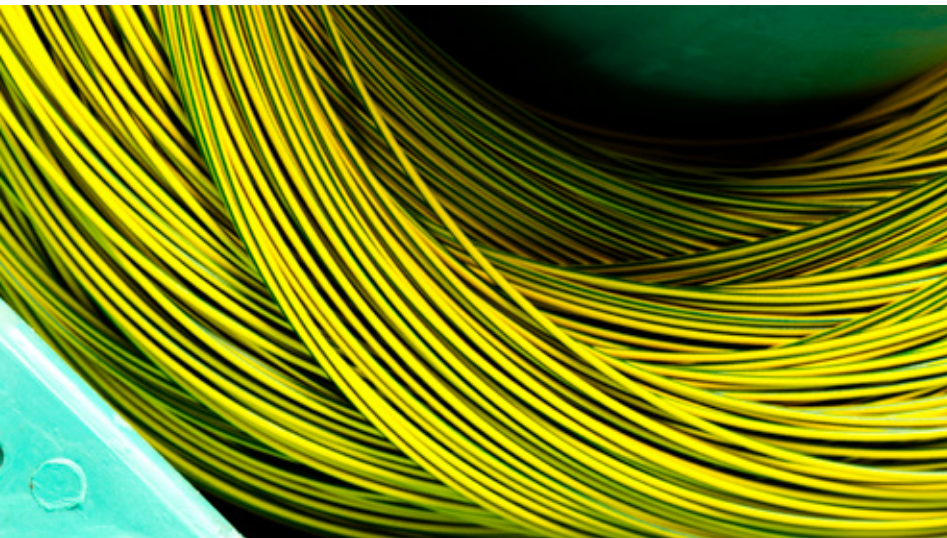
## Customer **Loyalty & Satisfaction**

We offer exceptional customer service locally and globally through offering quality products & services which in return strengthens and widens our customer loyalty base.



### Packaging:

We use cartoon boxes, plastic boxes, plastic spools and air coil in our products' packaging. Our main aim while using the packaging is to use recyclable materials to ensure the safety of our environment and to reduce the negative impact of the non-recyclable materials on our society. By reducing air and water pollution and saving energy, recycling offers important environmental benefit alongside achieving our goals in delivering products with the highest quality.



# PVC INSULATION BASED ON ISO 6722

## Cables Structure



- Conductor Insulation** Plain / tinned annealed copper  
PVC ( polyvinyl chloride )  
based on ISO 6722 class A
- Color code** Color coded with or without stripes upon request
- Temperature rating** - 40°C up to + 85°C
- Packing** Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Nominal Insulation Thickness (mm)	Maximum Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm <sup>2</sup> )	Nominal No. of wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km )			
AU001001	0.5	16 x 0.21	37.1	0.6	2.3	9
AU001002	0.75	24 x 0.21	24.7	0.6	2.5	12
AU001003	1	32 x 0.21	18.5	0.6	2.7	15
AU001004	1.5	30 x 0.26	12.7	0.6	3.0	20
AU001005	2	28 x 0.31	9.42	0.6	3.3	26
AU001006	2.5	50 x 0.26	7.6	0.7	3.6	32
AU001007	3	44 x 0.31	6.15	0.7	4.1	37
AU001008	4	56 x 0.31	4.71	0.8	4.4	49
AU001009	6	84 x 0.31	3.14	0.8	5.0	68

Notes: Other Automotive wires types can be provided on specific request.  
The above data are approximate and subjected to normal manufacturing tolerance.



## HEAT - RESISTANT PVC INSULATION BASED ON ISO 6722

## Cables Structure



<b>Conductor</b>	Plain / tinned annealed copper
<b>Insulation</b>	Heat resistant PVC ( polyvinyl chloride ) based on ISO 6722 class B.
<b>Color code</b>	Color coded with or without stripes upon request
<b>Temperature rating</b>	- 40°C up to +100°C
<b>Packing</b>	Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Nominal Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm <sup>2</sup> )	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km )			
AU001010	0.5	16 x 0.21	37.1	0.6	2.3	9
AU001011	0.75	24 x 0.21	24.7	0.6	2.5	11
AU001012	1	32 x 0.21	18.5	0.6	2.7	14
AU001013	1.5	30 x 0.26	12.7	0.6	3.0	19
AU001014	2.5	50 x 0.26	7.6	0.7	3.6	31
AU001015	4	56 x 0.31	4.71	0.8	4.4	49
AU001016	6	84 x 0.31	3.14	0.8	5.0	68

Notes: Other Automotive wires types can be provided on specific request.  
The above data are approximate and subjected to normal manufacturing tolerance.

## HEAT – PRESSURE RESISTANT PVC INSULATION BASED ON ISO 6722

### Cables Structure



<b>Conductor</b>	Plain / tinned annealed copper
<b>Insulation</b>	Heat resistant PVC ( polyvinyl chloride ) based on ISO 6722 class C. ( Hot pressure resistance test at 120°C )
<b>Color code</b>	Color coded with or without stripes upon request
<b>Temperature rating</b>	- 40°C up to + 120°C
<b>Packing</b>	Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm <sup>2</sup> )	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/ Km )			
AU001027	0.35	7 x 0.26	52	0.2	1.3	4.5
AU001028	2.5	19 x 0.19	37.1	0.22	1.6	6.6
AU001029	0.75	19 x 0.23	24.7	0.24	1.9	9
AU001030	1	19 x 0.26	18.5	0.24	2.1	11
AU001031	1.5	19 x 0.32	12.7	0.24	2.4	16
AU001032	2	19 x 0.37	9.42	0.24	2.6	22.5
AU001033	2.5	19 x 0.41	7.6	0.28	3.0	26

Notes: Other Automotive wires types can be provided on specific request.  
The above data are approximate and subjected to normal manufacturing tolerance.



## CONCENTRIC CONDUCTORS WITH PVC INSULATION BASED ON DIN 72551

### Cables Structure



<b>Conductor Insulation</b>	Concentric stranded copper conductor based on DIN 72551, part 6, type A. PVC ( polyvinyl chloride ) based on DIN 72551, part 5.
<b>Color code</b>	Color coded with or without stripes upon request
<b>Temperature rating</b>	- 40°C up to + 105°C
<b>Packing</b>	Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm <sup>2</sup> )	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/ Km )			
AU001027	0.35	7 x 0.26	52	0.2	1.3	4.5
AU001028	2.5	19 x 0.19	37.1	0.22	1.6	6.6
AU001029	0.75	19 x 0.23	24.7	0.24	1.9	9
AU001030	1	19 x 0.26	18.5	0.24	2.1	11
AU001031	1.5	19 x 0.32	12.7	0.24	2.4	16
AU001032	2	19 x 0.37	9.42	0.24	2.6	22.5
AU001033	2.5	19 x 0.41	7.6	0.28	3.0	26

Notes: Other Automotive wires types can be provided on specific request.  
The above data are approximate and subjected to normal manufacturing tolerance.

## PVC THIN INSULATION BASED ON DIN 72551

### Cables Structure



- Conductor Insulation**                      Concentric stranded copper conductor based on DIN 72551, part 6, type B. PVC ( polyvinyl chloride ) based on DIN 72551, part 5.
- Color code**                              Color coded with or without stripes upon request
- Temperature rating**                      - 40°C up to + 105°C
- Packing**                                      Cables are packed in carton boxes, plastic boxes, plastic spools and air coil.

Product Code	Conductor			Minimum Insulation Thickness (mm)	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
	Nominal Cross sectional area (mm <sup>2</sup> )	No. of Wires x Max Wire Diameter (No. x mm)	Max Conductor DC Resistance at 20°C (Ohm/Km )			
AU001034	0.35	12 x 0.21	52	0.2	1.4	4.5
AU001035	0.5	16 x 0.21	37.1	0.22	1.6	6.6
AU001036	0.75	24 x 0.21	24.7	0.24	1.9	9.0
AU001037	1	32 x 0.21	18.5	0.24	2.1	11.0
AU001038	1.5	30 x 0.26	12.7	0.24	2.4	16.0
AU001039	2	30 x 0.31	9.31	0.24	2.6	22.5
AU001040	2.5	50 x 0.26	7.6	0.28	3.0	26.0
AU001041	3	45 x 0.31	6.15	0.28	3.2	32.5
AU001042	4	56 x 0.31	4.7	0.32	3.7	42.0
AU001043	6	84 x 0.31	3.1	0.32	4.3	61.0

Notes: Other Automotive wires types can be provided on specific request.  
The above data are approximate and subjected to normal manufacturing tolerance.



# Certifications



# Elsewedy Cables Certificates for ISO 14067 Carbon Footprint

We are the only cables' manufacturer in the middle east to be awarded the TÜV NORD certification for "Calculation & Verification of Carbon Footprints & Carbon Neutrality".



## ANNEX

to Certificate Registration No. 44 811 191739  
TUV NORD CERT Standard TN-CC 020  
"Calculation & Verification of Carbon Footprints & Carbon Neutrality"

**Elsewedy Cables**  
A3 Industrial Zone  
10th Ramadan  
Al Sharqia, 44629  
Egypt

TUV NORD CERT GmbH, acting as an independent Certification Body and to a limited level of assurance, can confirm the carbon footprint of the fifteen cables to be as follows:

No	Size [mm <sup>2</sup> ]	Voltage	Cable Description	Total emission of 1 meter [gCO <sub>2</sub> e]
1	6X75	600V	Cu/AlPE	19.26
2	1X120	0.3/15 (15.5)kV	Cu/AlPE/C/W/PE	129.95
3	1X240	0.6/7 (5.2) kV	Cu/AlPE/PVC	170.54
4	1X240	0.6/7 (5.2) kV	Cu/AlPE/C/W/PE	258.20
5	1X300	1/2/7 (11) kV	Al/AlPE/C/W/PE	285.56
6	2X3X240	0.3/15 (15.5)kV	Al/AlPE/C/W/PE	362.62
7	2X3X240	20/34 (35) kV	Al/AlPE/C/W/PE	538.84
8	6X75	0.6/7 (5.2) kV	Al/AlPE/PE	82.69
9	1X150	0.6/7 (5.2) kV	Cu/AlPE/PVC	189.97
10	1X240	1/2/7 (11) kV	Al/AlPE/Al/L/PE	125.96
11	1X300	1/2/7 (11) kV	Al/AlPE/Al/L/PE	215.095
12	1X300	1/2/7 (11) kV	Al/AlPE/Al/L/PE	191.55
13	95		Hard Drawn Copper Conductor	22.27
14	95		Hard Drawn Copper Conductor	61.89
15	18400	7 A/11.2 (15.8)kV	Al/AlPE/Al/L/PE	223.43

End of the list

TUV NORD CERT GmbH  
Langenackstraße 20  
45141 Essen  
www.tuv-nord-cert.com

Essen, 2020-06-29

Page 1 of 1

## CERTIFICATE

TUV NORD CERT Standard TN-CC 020  
"Calculation & Verification of Carbon Footprints & Carbon Neutrality"

Evidence of conformity with the above standard has been furnished and is certified in accordance with TUV NORD CERT procedures for

**Elsewedy Cables**  
A3 Industrial Zone  
10th Ramadan  
Al Sharqia, 44629  
Egypt

The calculation of carbon footprint encompasses the emission from manufacture of the cables in terms of the raw materials, upstream and downstream transportation and manufacturing processes

Based on the performed assessment it can be stated that the calculation meets the requirements of the standard ISO 14067, which is the basis of the calculation and TN-CC 020, which has been used for the certification standard.

Certificate Registration No. 44 811 191739  
Aur Report No. 3523 4752

Reporting Period:  
Valid from 2018-01-01  
Valid until 2018-12-31

TUV NORD CERT GmbH

Essen, 2020-06-29

TUV NORD CERT GmbH

Langenackstraße 20

45141 Essen

www.tuv-nord-cert.com

# Sustainability

This study aims to layout and calculate the carbon footprint in the cables factory:

## Power related emissions

These emissions are linked to purchased electricity the corporate used, as well as its diesel and petrol consumption.

### a) Diesel

The United Industries consumed 144,000 liters of diesel annually. Diesel is a direct emission accounted for under scope 1. This amount was used in forklifts. The results are shown in Table 12.

Table 12: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Diesel	144,000	l/year	384,480
2018		144,000		384,480
2019		144,000		384,480

### b) Natural Gas

United Industries consumed 715,476 m<sup>3</sup> of natural gas in 2017, 765,662 m<sup>3</sup> in 2018, and 451,714 m<sup>3</sup> in 2019. Natural gas is direct emission accounted for under scope 1. This amount used in chillier. The results are shown in Table 13.

Table 13: Direct Emissions - scope 1 Gas

Scope 1		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Gas	715,476	m <sup>3</sup> /year	1,455,707
2018		765,662		1,557,816
2019		451,714		919,057

### c) Company owned cars

United Industries owned cars travelled 683,309 km in 2017, 579,000 km in 2018, and 1,889,287 km in 2019. The company-owned car emissions are a direct emission accounted for under scope 1. The results are shown in Table 14.

Table 14: Direct Emissions - scope 1 company-owned cars

Scope 1		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Company owned cars (Petrol)	683,309	km/year	136,887
2018		579,000		115,991
2019		1,889,287		134,522

### d) Electricity

Electricity is an indirect emission under scope 2. United Industries used electricity from the grid as an energy source for production, lighting, cooling, etc. In 2017 United Industries consumed 25,954,800 kWh, 26,025,600 kWh in 2018, and 23,803,200 kWh in 2019. The results are shown in Table 15.

Table 15: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Electricity	25,954,800	kWh/year	12,977,400
2018		26,025,600		13,012,800
2019		23,803,200		11,901,600



## Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel.

### a) Business Travel

In 2017 United Industries' total number of flights was 28. All flights were short-haul (flights up to 3,700km), and 19,200 km were business travel – no flights. In 2018 the total number of flights was 58. Fifty-six flights were short-haul, and two flights were long-haul and 29,690 km were business travel – no flights. In 2019 the total number of flights was 62, all were short-haul, and 72,414 km were business travel – no flights. The results are shown in Table 16. Business travel is indirect emission under scope 3

Table 16: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Business travel	93,400	km/year	16,273
2018		177,390		31,415
2019		226,714		40,491

### b) Commuting related emissions

The total United Industries staff count was 920 employees in 2017, 926 in 2018, and 960 employees in 2019. The staff commuting emission are shown in Table 17. Commuting emissions are indirect emissions under scope 3

Table 17: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Staff commuting	1,723,600	km/year	178,234
2018		1,522,512		154,611
2019		1,601,271		162,609

## Emissions due to paper consumption

In 2017 United Industries used 750,000 sheets. In 2018 the total used sheets was 1,120,000, and in 2019, the total used sheets was 900,000. The emission results are shown in Table 18.

Table 18: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	KgCO <sub>2</sub> e
2017	Paper consumption	3,742	kg/year	5,389
2018		5,588		8,047
2019		4,491		6,467

## Emissions due to waste management and disposal

Emissions at this section occur through the United Industries waste management and waste disposal process. The total amount of waste in 2017 was 1,409 tons, 1,448 tons in 2018, and 1,449 tons in 2019. The emission results are shown in Table 19.

Table 19: waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	63,542	KgCO <sub>2</sub> e
2018		38,825	
2019		39,117	

# Sustainability

## Results United Industries Egypt

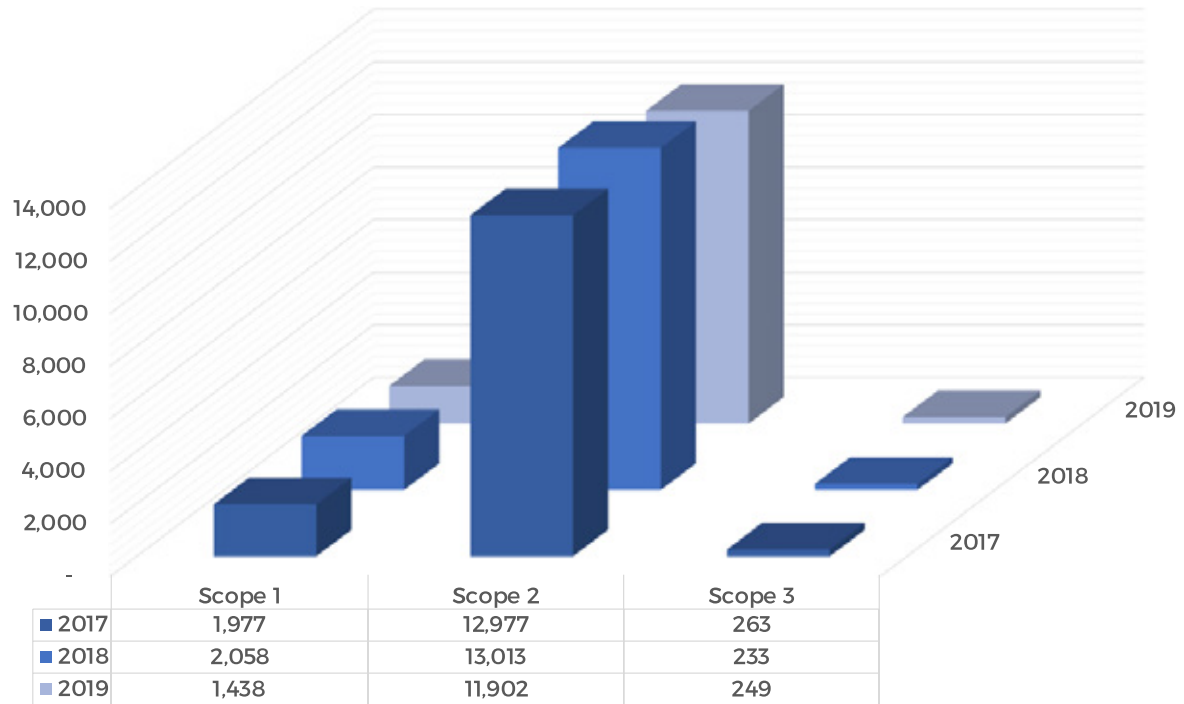
The total carbon footprint for United Industries amounts to 15,218 tons of CO<sub>2</sub>e in 2017, 15,304 tons of CO<sub>2</sub>e in 2018, and 13,832 tons of CO<sub>2</sub>e in 2019.

### a) Emissions per scope

Table 20: Emissions per scope

	2017	2018	2019
Scope	Emissions in tCO <sub>2</sub> e	Emissions in tCO <sub>2</sub> e	Emissions in tCO <sub>2</sub> e
Scope 1	1,977	2,058	1,438
Scope 2	12,977	13,013	11,902
Scope 3	263	233	249
<b>Total</b>	<b>15,218</b>	<b>15,304</b>	<b>13,588</b>

Graphic 6: Emissions per scope



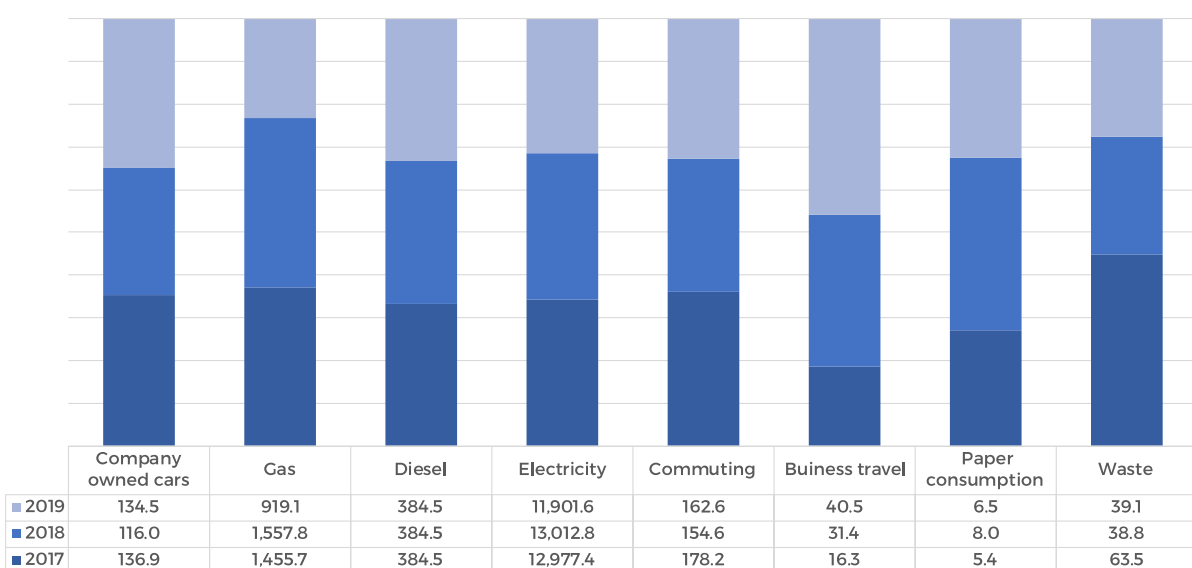
### b) Emission per category

Table 21: Emissions per scope

	2017	2018	2019
Category	Emissions in tCO <sub>2</sub> e	Emissions in tCO <sub>2</sub> e	Emissions in tCO <sub>2</sub> e
Company owned cars	136.9	116.0	134.5
Gas	1,455.7	1,557.8	919.06
Diesel	384.5	384.5	384.48
Electricity	12,977.4	13,012.8	11,901.60
Commuting	178.2	154.6	162.61

	2017	2018	2019
Buiness travel	16.3	31.4	40.49
Paper consumption	5.4	8.0	6.47
Waste	63.5	38.8	39.12
<b>TOTAL</b>	<b>15,218</b>	<b>15,304</b>	<b>13,588</b>

Graphic 7: Emissions per category



### C) Emission per employee

Table 22: Emissions per employee

Per employee	Emissions in tCO2e	tCO2e
2017	15,218	16.54
2018	15,304	16.53
2019	13,588	14.15

### D) Emission per m<sup>2</sup>

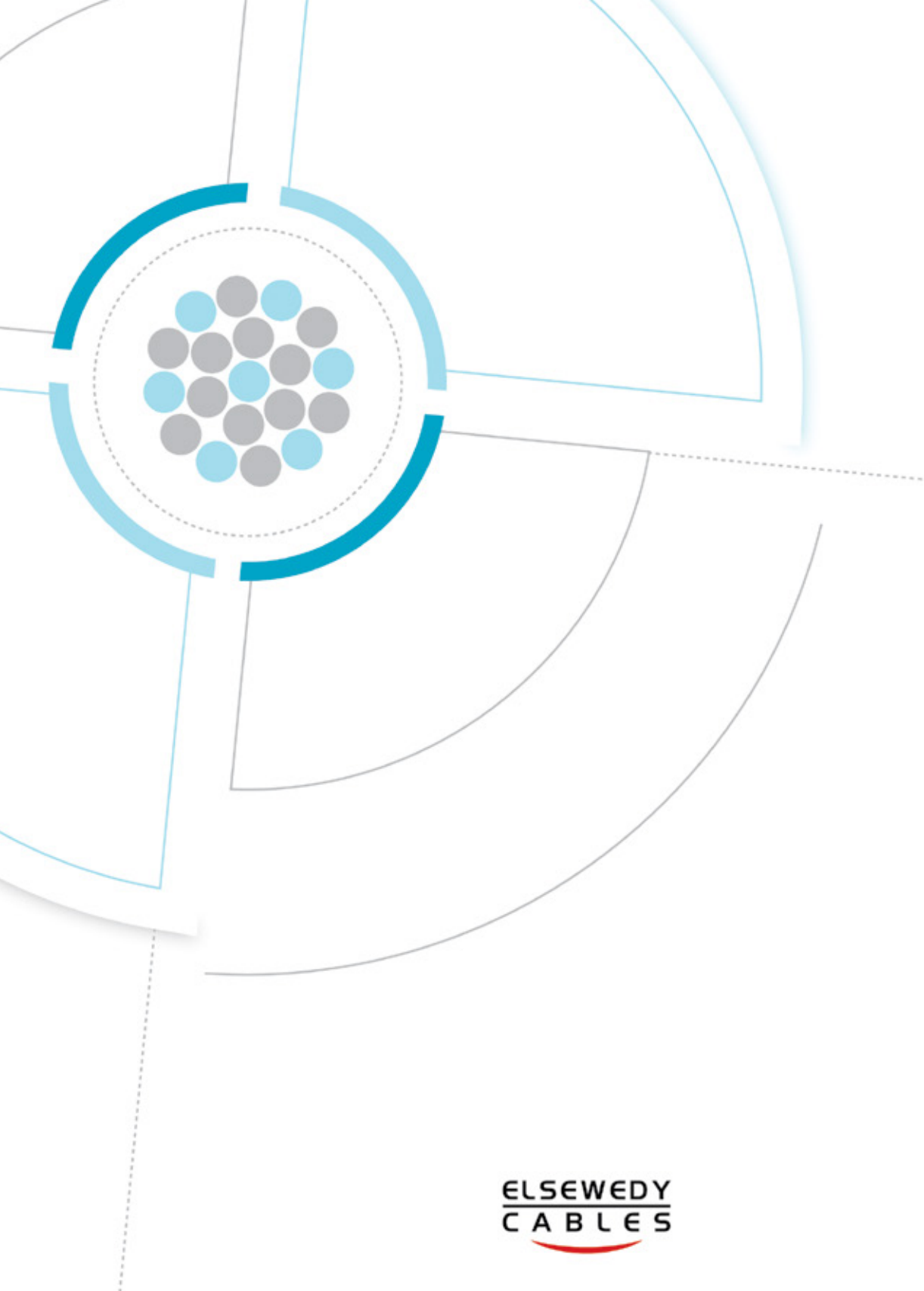
Table 23: Emissions per m<sup>2</sup>

Per m <sup>2</sup> (office space)	Emissions in tCO2e	tCO2e
2017	15,218	0.35
2018	15,304	0.22
2019	13,588	0.19



# Our Partners in Success





**ELSEWEDY**  
**CABLES**

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