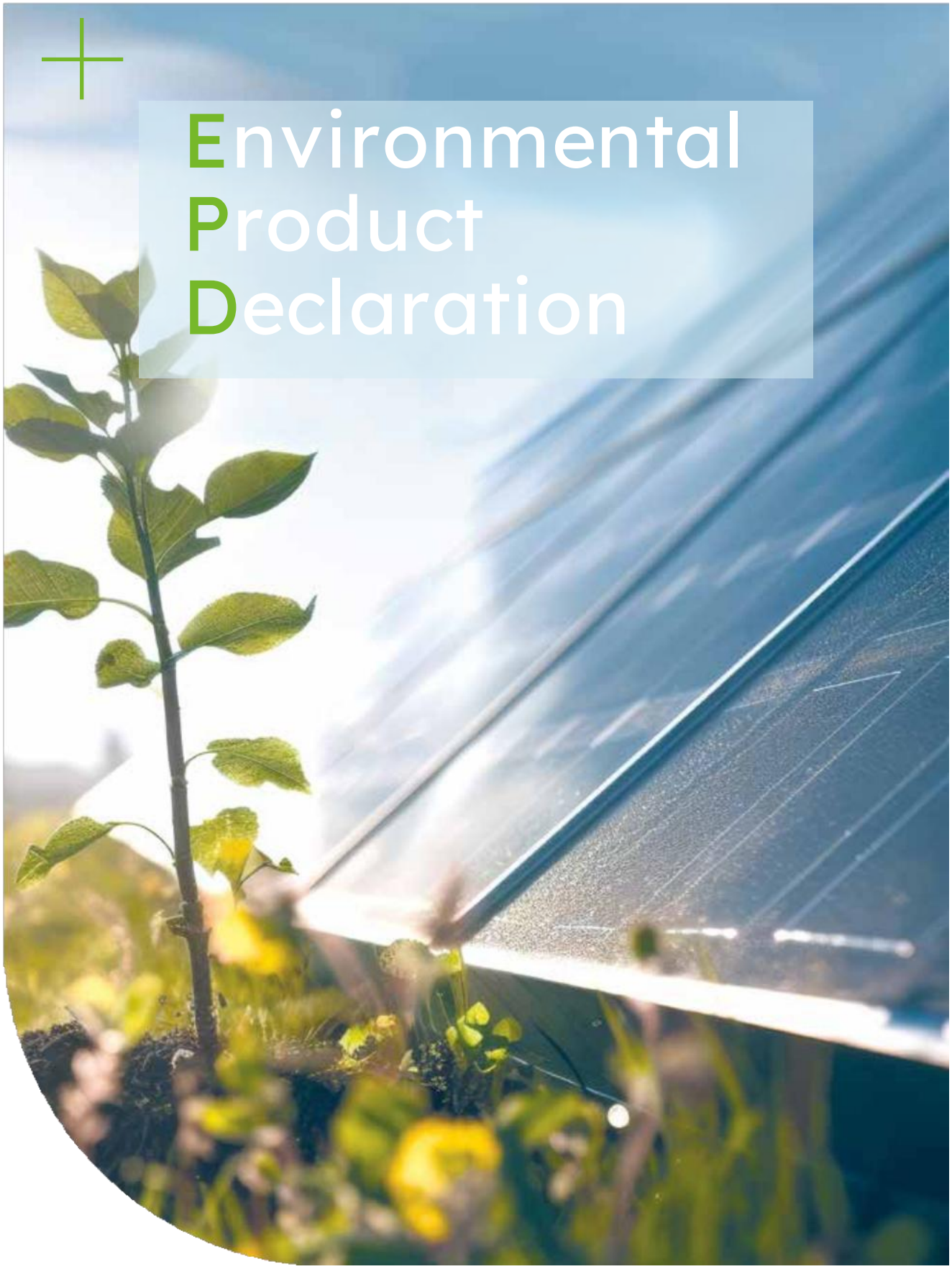
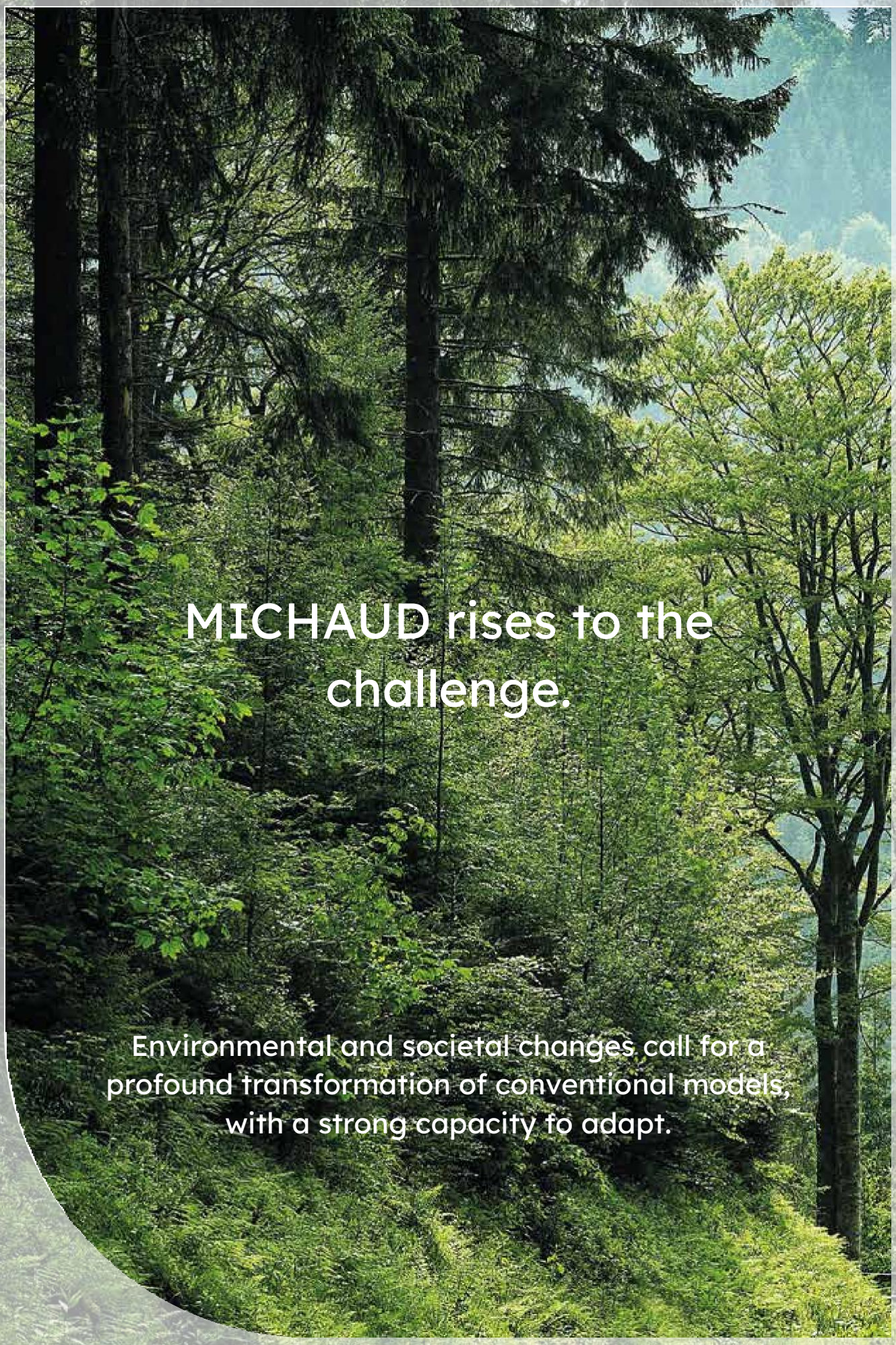


Environmental Product Declaration

MELBYE

MICHAUD
MATÉRIEL ÉLECTRIQUE

Fuse Switch Disconnector



MICHAUD rises to the challenge.

Environmental and societal changes call for a profound transformation of conventional models, with a strong capacity to adapt.

MICHAUD's historical roots lie in woodworking. Therefore, it is only natural that our family-run company has always been committed to a sustainable approach involving all the stakeholders in our activities.

The company's strategy is always aimed at sustaining and developing the human, environmental and economic assets of our ecosystem.

That's why, for decades, the company has been climbing the ladder of sustainable development, thanks to its teams who provide an innovative offering that connects everyone to electrical energy in the most sustainable conditions.

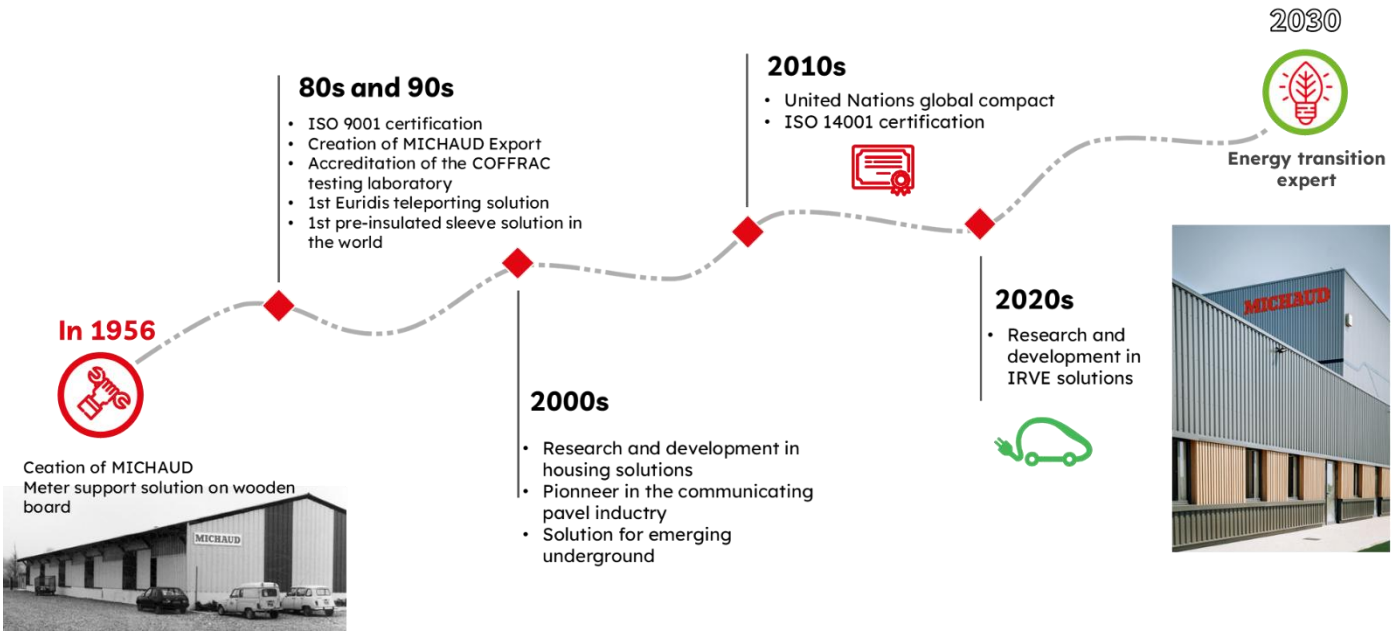
To ensure this, we were quick to frame our approach with appropriate certifications and membership of the Global Compact, supplemented by assessments by independent bodies.

Michaël JACQUOT

Summary

About the manufacturer

MICHAUD, an independent family-owned business for over 65 years, innovates to support the development and distribution of electricity for all.



The company, driven by strong human scale values, has contributed to the evolution of low-voltage energy distribution with significant innovations and advancements in every decade.

MICHAUD is committed to the energy transition and to the distribution of electricity for all by deploying innovative, connected, simple, and sustainable solutions that promote electric mobility, renewable energies, and energy efficiency.

General information

This environmental product declaration (EPD) is based on the international standard ISO 14021 (“Environmental labels and declarations – Self declared environmental claims – Type II environmental labelling”). The data in this EPD has been evaluated on a full-scale life cycle assessment (LCA) study according to ISO 14040/44.

Functional unit

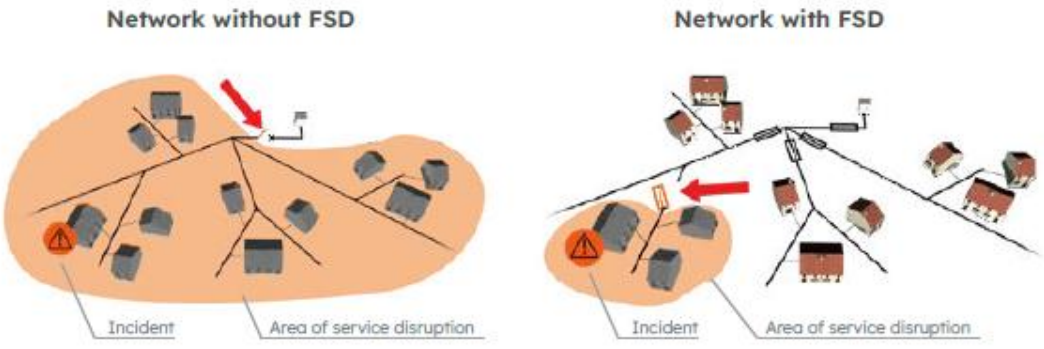
The function is defined as one unit of the product over its entire lifespan, from raw materials extraction through manufacturing, distribution, and end-of-life disposal. The product under study requires no maintenance or intervention throughout its service life. The timeframe considered for this functional unit corresponds to the product's expected lifespan, which remains consistent due to the absence of degradation or performance changes over time.

Product Description

Low voltage networks are usually structured in a star shape from the LV/MV transformer and are not looped.

A single short circuit could therefore make an entire network fail, creating customer service disruptions.

MICHAUD SOLUTION, A PROTECTION ON STRATEGIC POINTS:



- Control of faults propagation.
- Reduction of customers discontents.

A suitable earth system device enables the temporary fuse switch protection for work.

TWO TYPES OF PROTECTION:

Service protection

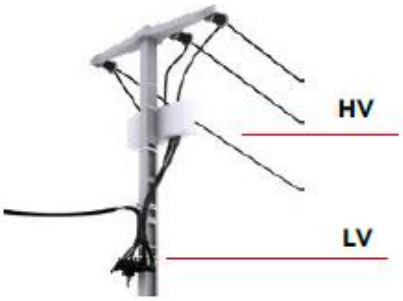
- Rating 100 or 160A.
- Fuse size 22x58 or NH00.
- Conductors section max 35, 95 or 120mm².
- Single phase FSD.

Network protection

- Rating 160A.
- Fuse size NH00.
- Conductors section max 95 or 120mm².
- Multi-phase FSD.
- Available in 2, 3, 4 and 6 poles.

THE BENEFITS:

- 50 up to 80% more economical than a circuit breaker.
- Strong solution, very little sensitive to charge imbalances.
- Solution available in single and three phases.



RANGE OF PRODUCTS COVERED BY THIS EPD:

Fuse Switch Disconnector 100A - 95²

K291
Insulation piercing

This Fuse Switch Disconnector (FSD) is a single phase device. It is installed at the top of pole or on wall.
It protects the overhead connection supplying an individual customer and the low voltage network.
It is designed to receive a neutral tube or a 100A maximum, size 22x58 fuse cartridge (according to the IEC 269-2.1 standard).

Fuse Switch Disconnector 160A

K292
Insulation piercing

L277
Insulation stripping

This Fuse Switch Disconnector (FSD) is a single phase device. It is installed at the top of pole or on wall. It protects the overhead connection supplying an individual customer and the low voltage network.
It is designated to receive a 160A fuse cartridge or 240A maximum solid connecting link size 00 (according to the IEC 269-2.1 standard).

Fuse Switch Disconnector double pole 160A

K298
Insulation piercing

L278
Insulation stripping

This Gang Fuse Switch Disconnector (Gang FSD) is a multi-phase device. It is installed at the top of a pole or on wall.
It protects the overhead connection supplying one or several multi-phase customers or the low voltage circuit of a pole mounted transformer.
It is designed to receive 160A fuse cartridges or 240A solid connecting links, size 00 (according to the IEC 269-2.1 standard).

Fuse Switch Disconnector triple pole 160A

K293
Insulation piercing

L284
Insulation stripping

This Gang Fuse Switch Disconnector (FSD) is a multi-phase device. It is installed at the top of a pole or on wall.
It protects the overhead connection supplying one or more multi-phase customers or the low voltage circuit of a pole mounted transformer.
It is designed to receive 160A fuse cartridge or 240A solid connecting links, size 00 (according to the IEC 269-2.1 standard).

Fuse Switch Disconnector double triple pole 160A (size 00)

K296
Insulation piercing

This Gang Fuse Switch Disconnector (FSD) is a multi-phase device. It is installed at the top of a pole or on wall.
It protects the overhead connection supplying one or more multi-phase customers or the low voltage circuit of a pole mounted transformer.
It is designed to receive 160A fuse cartridge or 240A solid connecting links, size 00 (according to the IEC 269-2.1 standard).

Fuse Switch Disconnector double triple pole 160A (size 00)

K294
Insulation piercing

L281
Insulation stripping

This Gang Fuse Switch Disconnector (FSD) is a multi-phase device. It is installed at the top of a pole or on wall.
It protects the overhead connection supplying one or more multi-phase customers or the low voltage circuit of a pole mounted transformer.
It is designed to receive 160A fuse cartridge or 240A solid connecting links, size 00 (according to the IEC 269-2.1 standard).

See further information on: https://www.michaud-export.com/group/wp-content/uploads/2024/10/Catalogue-BT-AN-2024-2025.pdf

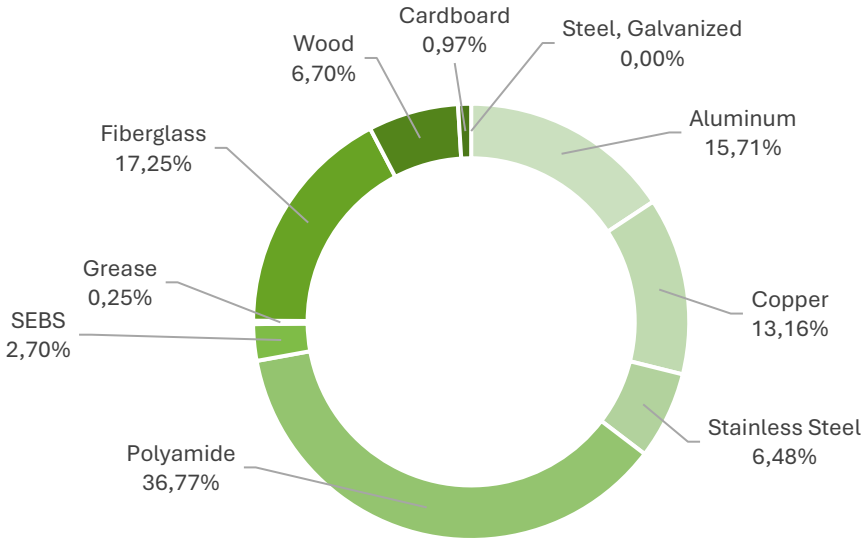
Substances, REACH – Very High Concern

The product does not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

Material Composition

The following chart outlines the overall material composition of the calculated reference product.

K291: SINGLE PHASE FSD 100A (22x58) PIERCING 6-95

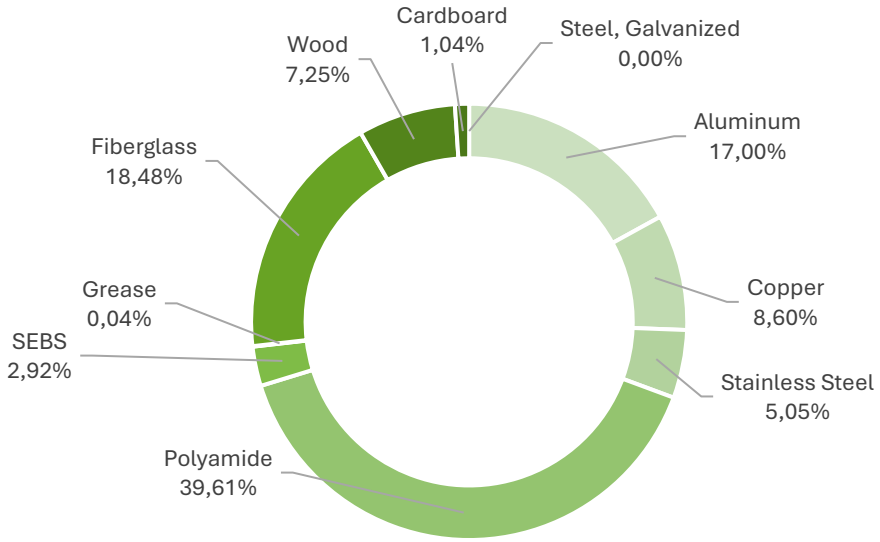


K291
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	35.36 %	EU / China
Minerals	17.25 %	EU
Fossil materials	39.73 %	EU
Wood, cardboard (packaging)	7.67 %	EU
Bio-based materials	-	-

Total weight of the product: 0.518kg

K292: SINGLE PHASE FSD 160A (NH00) PIERCING 6-95

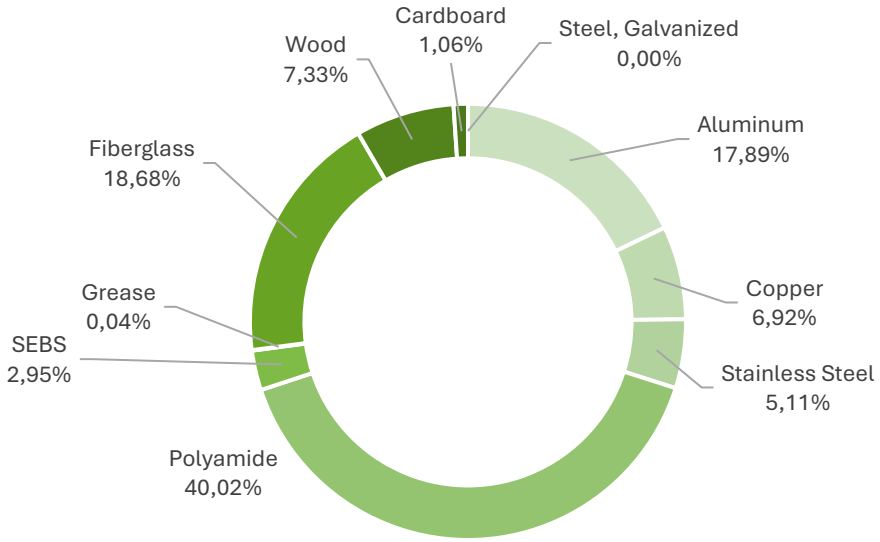


K292
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	30.65 %	EU / China
Minerals	18.48 %	EU
Fossil materials	42.57 %	EU
Wood, cardboard (packaging)	8.29 %	EU
Bio-based materials	-	-

Total weight of the product: 0.479kg

L277: SINGLE PHASE FSD 160A (NH 00) STRIPPING 6-120

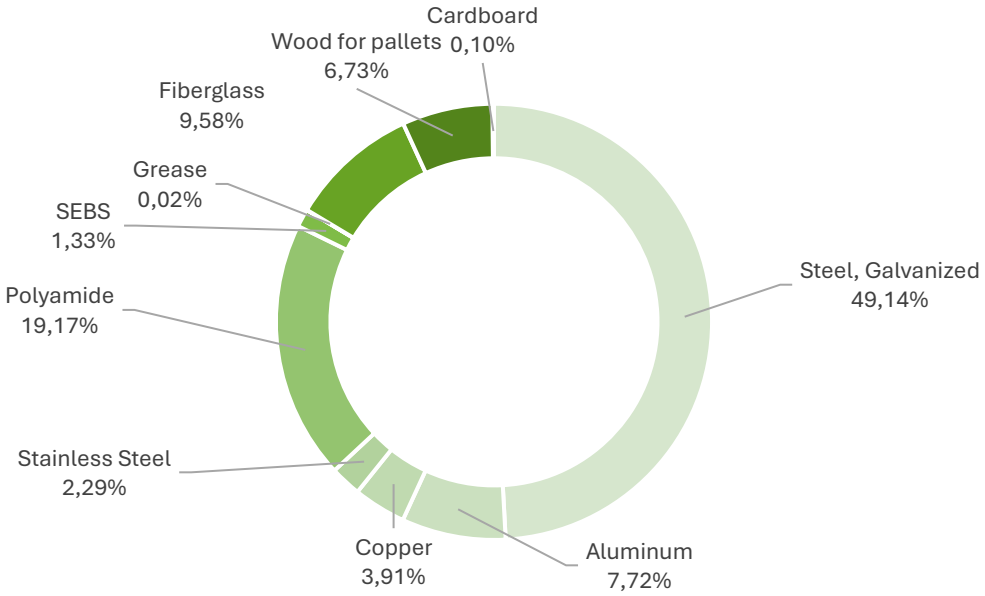


L277
Insulation stripping

Raw material category	Amount, mass- %	Material Origin
Metals	29.92 %	EU / China
Minerals	18.68 %	EU
Fossil materials	43.02 %	EU
Wood, cardboard (packaging)	8.38 %	EU
Bio-based materials	-	-

Total weight of the product: 0.474kg

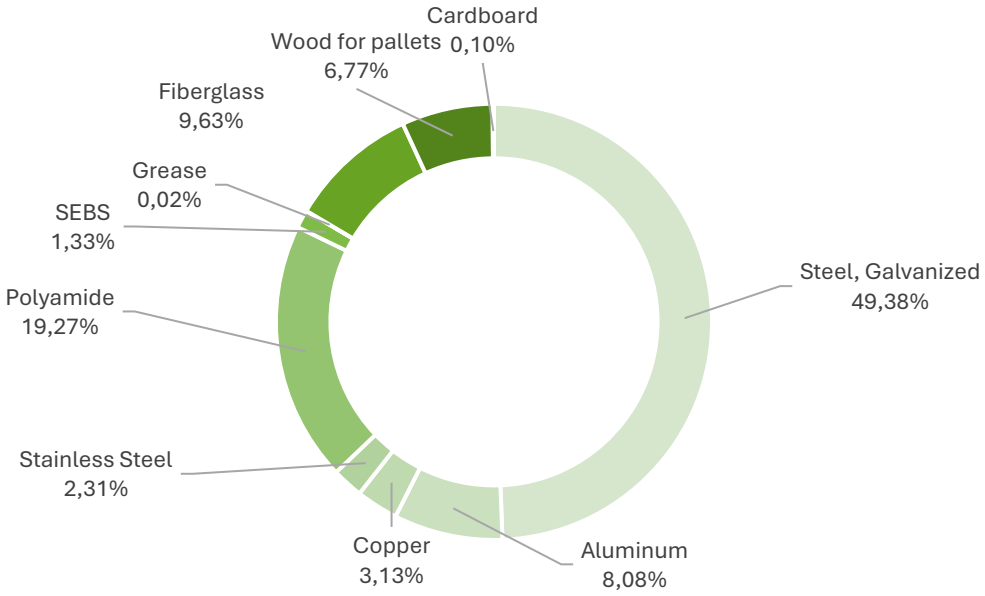
K298: DOUBLE PHASE FSD 160A (NH00) PIERCING 6-95



K298
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	63.06 %	EU / China
Minerals	9.58 %	EU
Fossil materials	20.52 %	EU
Wood, cardboard (packaging)	6.83 %	EU
Bio-based materials	-	-

Total weight of the product: 2.109kg

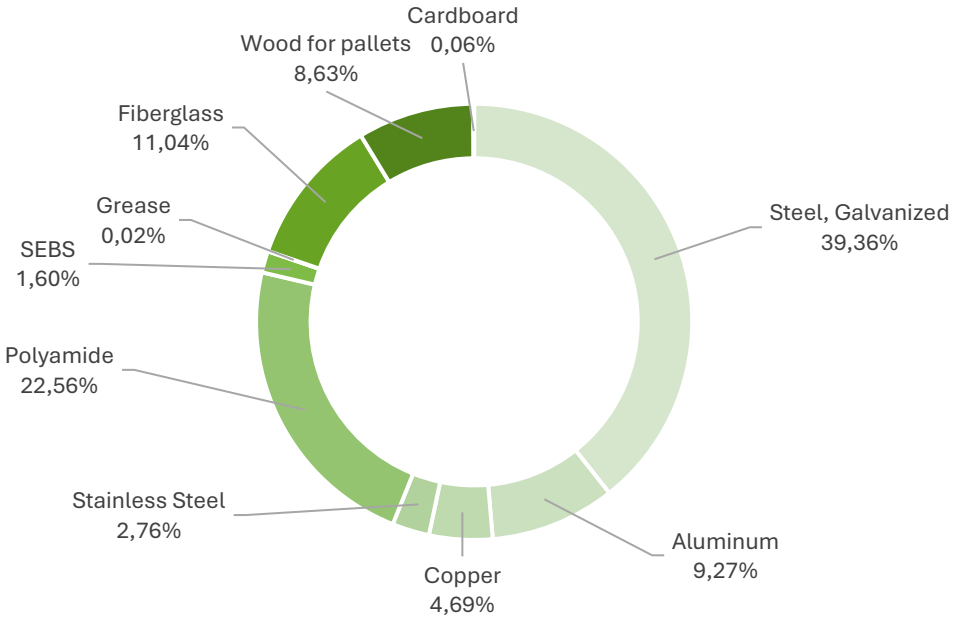


L278
Insulation stripping

Raw material category	Amount, mass- %	Material Origin
Metals	62.89 %	EU / China
Minerals	9.63 %	EU
Fossil materials	20.62 %	EU
Wood, cardboard (packaging)	6.87 %	EU
Bio-based materials	-	-

Total weight of the product: 2.099kg

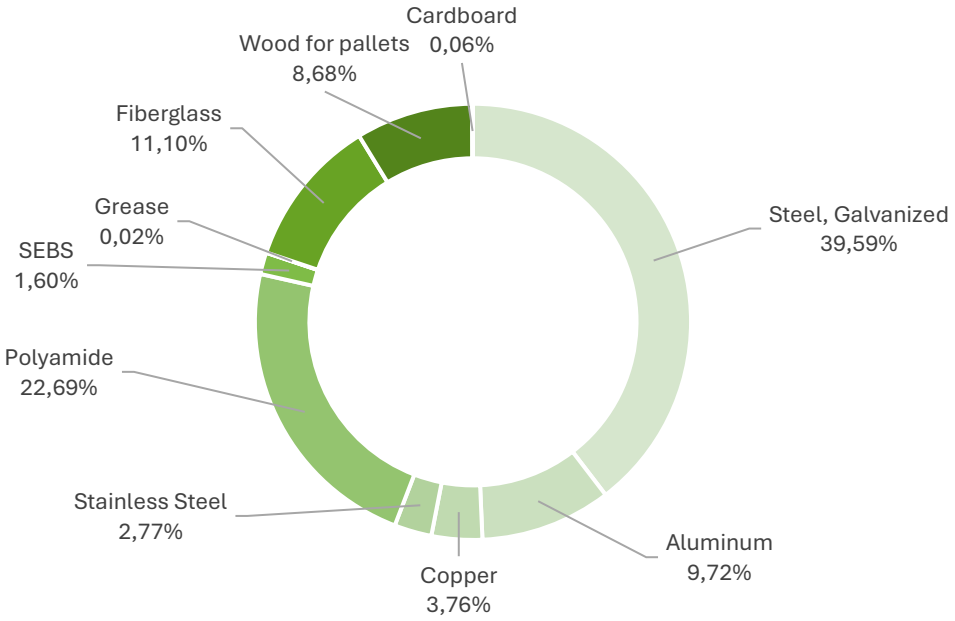
K293: TRIPLE PHASE FSD 160A (NH00) PIERCING 6-95



K293
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	56.09 %	EU / China
Minerals	11.04 %	EU
Fossil materials	24.18 %	EU
Wood, cardboard (packaging)	8.69 %	EU
Bio-based materials	-	-

Total weight of the product: 2.633kg

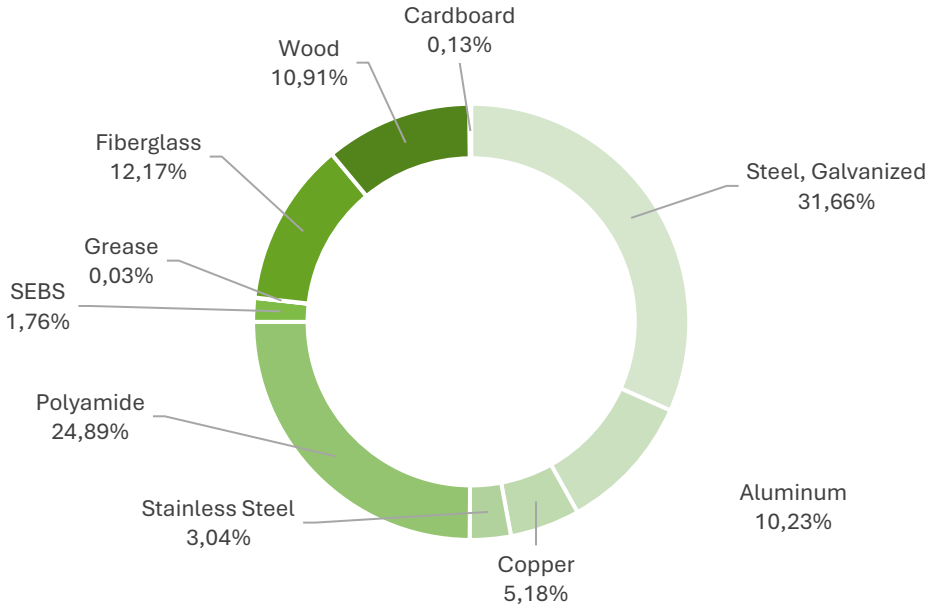


L284
Insulation stripping

Raw material category	Amount, mass- %	Material Origin
Metals	55.84 %	EU / China
Minerals	11.10 %	EU
Fossil materials	24.32 %	EU
Wood, cardboard (packaging)	8.74 %	EU
Bio-based materials	-	-

Total weight of the product: 2.618kg

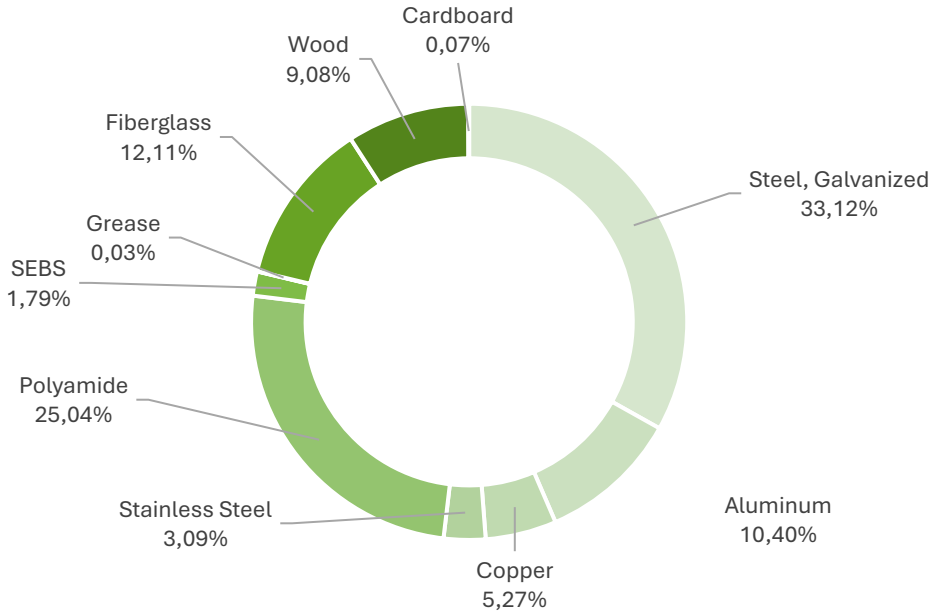
K296: DOUBLE TRIPLE PHASE FSD 160A (NH00) PIERCING 6-95



K296
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	50.11 %	EU / China
Minerals	12.17 %	EU
Fossil materials	26.67 %	EU
Wood, cardboard (packaging)	11.04 %	EU
Bio-based materials	-	-

Total weight of the product: 4.774kg

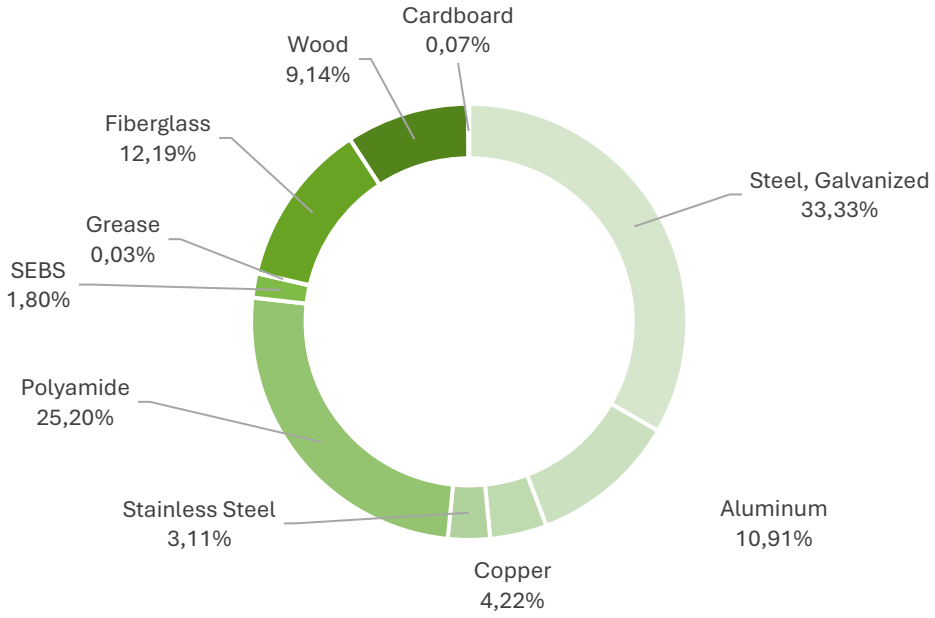


K294
Insulation piercing

Raw material category	Amount, mass- %	Material Origin
Metals	51.88 %	EU / China
Minerals	12.11 %	EU
Fossil materials	26.86 %	EU
Wood, cardboard (packaging)	9.15 %	EU
Bio-based materials	-	-

Total weight of the product: 3.130kg

L281: QUADRUPLE PHASE FSD 160A (NH00) STRIPPING 6-120



L281
Insulation stripping

Raw material category	Amount, mass- %	Material Origin
Metals	51.57 %	EU / China
Minerals	12.19 %	EU
Fossil materials	27.03 %	EU
Wood, cardboard (packaging)	9.21 %	EU
Bio-based materials	-	-

Total weight of the product: 3.110kg

Life cycle stages and reference scenarios

Manufacturing

This stage covers the extraction of natural resources, production of raw materials, manufacturing, packaging, and transport.

Distribution & Use

This stage covers the product's distribution, use and maintenance. Different operating conditions can lead to deviations from the reference scenario.

End-Of-Life

This stage covers the disassembly or shredding and material recycling of all recyclable materials, as well as energy recovery, thermal treatment and the disposal of all other materials.

Scenarios

Energy model used:
China (standard mix)
France (standard mix)
Tunisia (standard mix)

Transportation model:
Sea freight 10 230km
Truck (27t) 943km

Energy model used:
Global (standard mix)

Distribution scenario:
Truck (27t) 300 km

Product use & maintenance scenario:
Not investigated as actions are not required during the product's lifespan.

Energy model used:
EMEA

End-of-life scenario:
Truck 100 km

Key environmental performance indicators

The following impact categories characterise the product's environmental performance footprint. They have been calculated by the Bilan Produit® (Product Statement) tool furnished by the ADEME (Agence De l'Environnement et de la Maîtrise de l'Énergie which is the French Agency for Environment and Energy Management). It is a public institution of industrial and commercial nature (EPIC) created in 1991 and placed under the supervision of the Ministries of Higher Education, Research and Innovation, and Ecological and Solidarity Transition.

To ensure the high quality and completeness of the LCA results, Primary Data have been used whenever possible. Datasets for resources, such as electrical energy or natural gas, are chosen from the region where the product is produced or assembled. If primary data are not available, datasets reflecting state-of-the-art manufacturing technology are considered.

K291 : SINGLE PHASE FSD 100A (22x58) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	6,14E+00	5,37E+00	1,37E-01	6,32E-01
Climate change - Biogenic	kg CO_2 eq	2,01E-03	1,76E-03	2,50E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	6,13E+00	5,37E+00	1,36E-01	6,32E-01
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	3,72E-02	3,61E-02	7,38E-04	3,21E-04
Ozone depletion	kg CFC 11 eq	8,97E-08	8,52E-08	4,46E-09	5,96E-12
Eutrophication, freshwater	kg P eq	1,10E-04	6,98E-05	2,86E-05	1,20E-05
Eutrophication, marine	kg N eq	8,63E-03	8,13E-03	2,85E-04	2,17E-04
Eutrophication, terrestrial	mole N eq	7,04E-02	6,61E-02	2,95E-03	1,37E-03
Photochemical ozone formation	kg NMVOC eq	1,97E-02	1,86E-02	6,22E-04	4,72E-04
Particulate matter	Disease incidences	4,98E-07	4,83E-07	1,14E-08	3,18E-09
Ionizing radiation, human health	kBq U235 eq	1,07E+01	1,07E+01	4,56E-02	7,25E-03
Resource use, fossils	MJ	1,00E+02	9,72E+01	2,58E+00	6,05E-01
Resource use, mineral and metals	kg Sb eq	2,86E-04	2,85E-04	3,24E-07	6,16E-08
Land use	dimensionless (pt)	1,69E+01	7,30E-01	1,62E+01	0,00E+00

K291
Insulation piercing

K292 : SINGLE PHASE FSD 160A (NH00) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	5.78E+00	5.08E+00	1.33E-01	5.70E-01
Climate change - Biogenic	kg CO_2 eq	2.00E-03	1.75E-03	2,50E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	5.78E+00	5.07E+00	1.33E-01	5.70E-01
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	3.34E-02	3.23E-02	7.18E-04	2,91E-04
Ozone depletion	kg CFC 11 eq	8.81E-08	8.36E-08	4.46E-09	5.41E-12
Eutrophication, freshwater	kg P eq	1.08E-04	6.90E-05	2.86E-05	1.07E-05
Eutrophication, marine	kg N eq	8.06E-03	7.59E-03	2.75E-04	1.97E-04
Eutrophication, terrestrial	mole N eq	6.43E-02	6.03E-02	2.85E-03	1.24E-03
Photochemical ozone formation	kg NMVOC eq	1.82E-02	1,72E-02	6.02E-04	4.27E-04
Particulate matter	Disease incidences	4.58E-07	4.47E-07	1.12E-08	2.88E-09
Ionizing radiation, human health	kBq U235 eq	1.06E+01	1.06E+01	4.52E-02	6.53E-03
Resource use, fossils	MJ	9.70E+01	9.40E+01	2.53E+00	5.48E-01
Resource use, mineral and metals	kg Sb eq	1.74E-04	1.73E-04	3.13E-07	5.60E-08
Land use	dimensionless (pt)	1,69E+01	7.04E-01	1,62E+01	0,00E+00

K292
Insulation piercing

L277 : SINGLE PHASE FSD 160A (NH 00) STRIPPING 6-120

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	5,74E+00	5,04E+00	1,33E-01	5,61E-01
Climate change - Biogenic	kg CO_2 eq	2,00E-03	1,75E-03	2,50E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	5,73E+00	5,04E+00	1,33E-01	5,61E-01
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	3,26E-02	3,15E-02	7,16E-04	2,87E-04
Ozone depletion	kg CFC 11 eq	8,91E-08	8,46E-08	4,46E-09	5,33E-12
Eutrophication, freshwater	kg P eq	1,08E-04	6,90E-05	2,86E-05	1,05E-05
Eutrophication, marine	kg N eq	7,98E-03	7,51E-03	2,74E-04	1,95E-04
Eutrophication, terrestrial	mole N eq	6,34E-02	5,94E-02	2,83E-03	1,22E-03
Photochemical ozone formation	kg NMVOC eq	1,80E-02	1,70E-02	6,00E-04	4,21E-04
Particulate matter	Disease incidences	4,49E-07	4,35E-07	1,12E-08	2,84E-09
Ionizing radiation, human health	kBq U235 eq	1,11E+01	1,11E+01	4,52E-02	6,44E-03
Resource use, fossils	MJ	9,82E+01	9,51E+01	2,52E+00	5,40E-01
Resource use, mineral and metals	kg Sb eq	1,39E-04	1,39E-04	3,12E-07	5,53E-08
Land use	dimensionless (pt)	1,69E+01	7,04E-01	1,62E+01	0,00E+00

L277
Insulation stripping

K298 : DOUBLE PHASE FSD 160A (NH00) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	2,38E+01	2,00E+01	1,95E-01	3,65E+00
Climate change - Biogenic	kg CO_2 eq	3,81E-03	3,68E-03	1,25E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	2,38E+01	2,00E+01	1,95E-01	3,65E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	1,38E-01	1,35E-01	1,17E-03	1,81E-03
Ozone depletion	kg CFC 11 eq	2,34E-07	2,31E-07	2,50E-09	3,12E-11
Eutrophication, freshwater	kg P eq	2,35E-04	1,47E-04	1,44E-05	7,37E-05
Eutrophication, marine	kg N eq	3,56E-02	3,39E-02	5,59E-04	1,18E-03
Eutrophication, terrestrial	mole N eq	3,38E-01	3,25E-01	5,81E-03	7,73E-03
Photochemical ozone formation	kg NMVOC eq	8,77E-02	8,39E-02	1,12E-03	2,65E-03
Particulate matter	Disease incidences	1,43E-06	1,40E-06	1,48E-08	1,76E-08
Ionizing radiation, human health	kBq U235 eq	2,61E+01	2,61E+01	3,36E-02	2,87E-02
Resource use, fossils	MJ	2,93E+02	2,86E+02	3,11E+00	3,32E+00
Resource use, mineral and metals	kg Sb eq	4,66E-04	4,65E-04	6,11E-07	3,40E-07
Land use	dimensionless (pt)	1,38E-01	1,35E-01	1,17E-03	1,81E-03

K298
Insulation piercing

L278 : DOUBLE PHASE FSD 160A (NH00) STRIPPING 6-120

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	2,38E+01	1,99E+01	1,94E-01	3,63E+00
Climate change - Biogenic	kg CO_2 eq	3,81E-03	3,68E-03	1,25E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	2,38E+01	1,99E+01	1,94E-01	3,63E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	1,36E-01	1,33E-01	1,16E-03	1,80E-03
Ozone depletion	kg CFC 11 eq	2,36E-07	2,33E-07	2,50E-09	3,11E-11
Eutrophication, freshwater	kg P eq	2,35E-04	1,47E-04	1,44E-05	7,33E-05
Eutrophication, marine	kg N eq	3,55E-02	3,37E-02	5,57E-04	1,17E-03
Eutrophication, terrestrial	mole N eq	3,36E-01	3,23E-01	5,78E-03	7,69E-03
Photochemical ozone formation	kg NMVOC eq	8,72E-02	8,35E-02	1,12E-03	2,63E-03
Particulate matter	Disease incidences	1,42E-06	1,39E-06	1,47E-08	1,76E-08
Ionizing radiation, human health	kBq U235 eq	2,72E+01	2,71E+01	3,35E-02	2,86E-02
Resource use, fossils	MJ	2,95E+02	2,89E+02	3,10E+00	3,31E+00
Resource use, mineral and metals	kg Sb eq	3,96E-04	3,95E-04	6,09E-07	3,39E-07
Land use	dimensionless (pt)	9,57E+00	1,48E+00	8,09E+00	0,00E+00

L278
Insulation stripping

K293 : TRIPLE PHASE FSD 160A (NH00) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	2,96E+01	2,51E+01	2,91E-01	4,19E+00
Climate change - Biogenic	kg CO_2 eq	5,69E-03	5,44E-03	2,50E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	2,96E+01	2,51E+01	2,90E-01	4,19E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	1,71E-01	1,67E-01	1,71E-03	2,09E-03
Ozone depletion	kg CFC 11 eq	3,20E-07	3,15E-07	4,77E-09	3,66E-11
Eutrophication, freshwater	kg P eq	3,29E-04	2,16E-04	2,87E-05	8,43E-05
Eutrophication, marine	kg N eq	4,36E-02	4,15E-02	7,77E-04	1,36E-03
Eutrophication, terrestrial	mole N eq	4,02E-01	3,85E-01	8,09E-03	8,94E-03
Photochemical ozone formation	kg NMVOC eq	1,06E-01	1,01E-01	1,59E-03	3,06E-03
Particulate matter	Disease incidences	1,89E-06	1,85E-06	2,27E-08	2,04E-08
Ionizing radiation, human health	kBq U235 eq	3,67E+01	3,66E+01	6,45E-02	3,51E-02
Resource use, fossils	MJ	3,89E+02	3,80E+02	4,89E+00	3,86E+00
Resource use, mineral and metals	kg Sb eq	6,39E-04	6,38E-04	8,42E-07	3,96E-07
Land use	dimensionless (pt)	1,84E+01	2,18E+00	1,62E+01	0,00E+00

K293
Insulation piercing

L284 : TRIPLE PHASE FSD 160A (NH00) STRIPPING 6-120

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	2,94E+01	2,50E+01	2,90E-01	4,17E+00
Climate change - Biogenic	kg CO_2 eq	5,69E-03	5,44E-03	2,50E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	2,94E+01	2,50E+01	2,89E-01	4,17E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	1,69E-01	1,65E-01	1,70E-03	2,08E-03
Ozone depletion	kg CFC 11 eq	3,23E-07	3,18E-07	4,77E-09	3,64E-11
Eutrophication, freshwater	kg P eq	3,29E-04	2,16E-04	2,87E-05	8,38E-05
Eutrophication, marine	kg N eq	4,34E-02	4,13E-02	7,73E-04	1,35E-03
Eutrophication, terrestrial	mole N eq	3,99E-01	3,82E-01	8,05E-03	8,89E-03
Photochemical ozone formation	kg NMVOC eq	1,05E-01	1,00E-01	1,58E-03	3,04E-03
Particulate matter	Disease incidences	1,86E-06	1,82E-06	2,26E-08	2,03E-08
Ionizing radiation, human health	kBq U235 eq	3,83E+01	3,82E+01	6,44E-02	3,48E-02
Resource use, fossils	MJ	3,92E+02	3,84E+02	4,87E+00	3,83E+00
Resource use, mineral and metals	kg Sb eq	5,35E-04	5,34E-04	8,38E-07	3,94E-07
Land use	dimensionless (pt)	1,84E+01	2,18E+00	1,62E+01	0,00E+00

L284
Insulation stripping

K296 : DOUBLE TRIPLE PHASE FSD 160A (NH00) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	5.29E+01	4.53E+01	5.40E-01	7.03E+00
Climate change - Biogenic	kg CO_2 eq	1.13E-02	1.09E-02	4.07E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	5.28E+01	4.53E+01	5.40E-01	7.03E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	3.06E-01	2.99E-01	3.22E-03	3.54E-03
Ozone depletion	kg CFC 11 eq	6.07E-07	5.99E-07	7.87E-09	6.16E-11
Eutrophication, freshwater	kg P eq	6.19E-04	4.31E-04	4.69E-05	1.41E-04
Eutrophication, marine	kg N eq	7.73E-02	7.35E-02	1.44E-03	2.30E-03
Eutrophication, terrestrial	mole N eq	6.96E-01	6.66E-01	1.50E-02	1.52E-02
Photochemical ozone formation	kg NMVOC eq	1.85E-01	1,77E-01	2.96E-03	5.15E-03
Particulate matter	Disease incidences	3.52E-06	3.45E-06	4.264E-08	3.45E-08
Ionizing radiation, human health	kBq U235 eq	7.11E+01	7.09E+01	1.30E-01	5.47E-02
Resource use, fossils	MJ	7.28E+02	7.13E+02	9.24E+00	6.48E+00
Resource use, mineral and metals	kg Sb eq	1.22E-03	1.21E-03	1.51E-06	6.75E-07
Land use	dimensionless (pt)	3.07E+01	4.36E+00	2.64E+01	0,00E+00

K296
Insulation piercing

K294 : QUADRUPLE PHASE FSD 160A (NH00) PIERCING 6-95

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	3.52E+1	3.02E+01	3.42E-01	4.71E+00
Climate change - Biogenic	kg CO_2 eq	7.45E-3	7.19E-03	2,58E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	3.52E+1	3.02E+01	3.42E-01	4.71E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	2.04E-1	2.00E-01	2.04E-03	2,37E-03
Ozone depletion	kg CFC 11 eq	4.03E-7	3.98E-07	5.00E-09	4.19E-11
Eutrophication, freshwater	kg P eq	4.10E-4	2,85E-04	2,97E-05	9.49E-05
Eutrophication, marine	kg N eq	5.15E-2	4,91E-02	9.23E-04	1.54E-03
Eutrophication, terrestrial	mole N eq	4.65E-1	4.45E-01	9.63E-03	1.01E-02
Photochemical ozone formation	kg NMVOC eq	1.24E-1	1,18E-01	1.89E-03	3.45E-03
Particulate matter	Disease incidences	2.34E-6	2.29E-06	2.674E-08	2.32E-08
Ionizing radiation, human health	kBq U235 eq	4.73E+1	4.72E+01	7.73E-02	4.12E-02
Resource use, fossils	MJ	4.84E+2	4.74E+02	5.77E+00	4.38E+00
Resource use, mineral and metals	kg Sb eq	8.13E-4	8.11E-04	9.83E-07	4.52E-07
Land use	dimensionless (pt)	1.96E+1	2,89E+00	1,67E+01	0,00E+00

K294
Insulation piercing

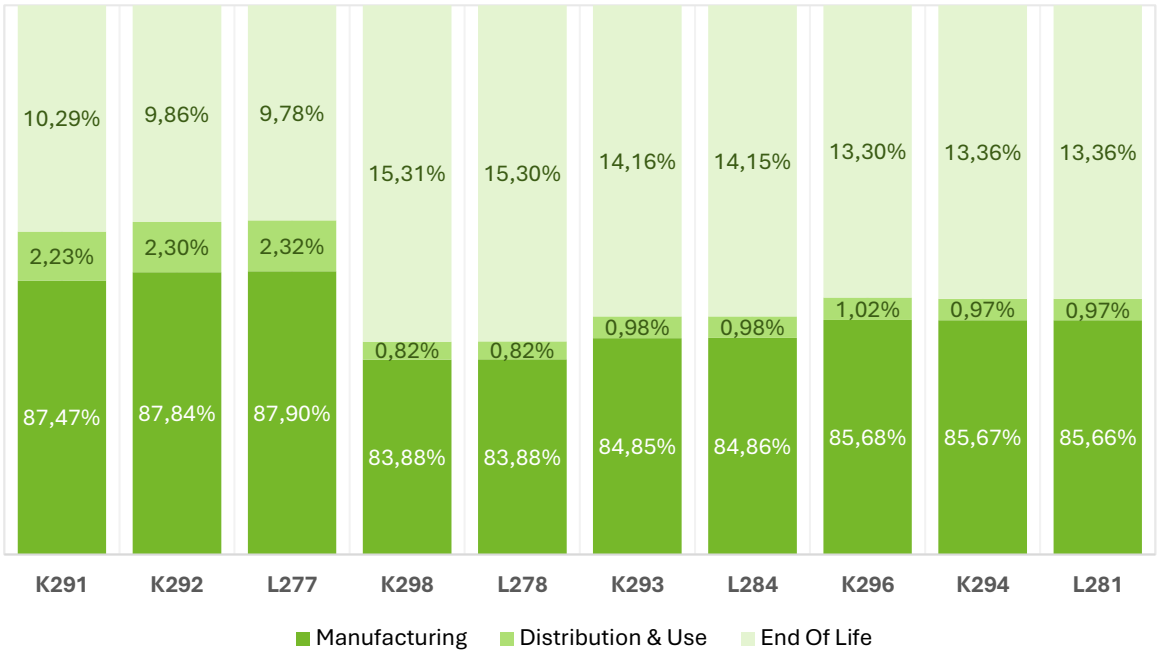
L281 : QUADRUPLE PHASE FSD 160A (NH00) STRIPPING 6-120

Impact category	Unit	Total	Manufacturing	Distribution	End Of Life
Climate change	kg CO_2 eq	3,50E+01	3,00E+01	3,41E-01	4,68E+00
Climate change - Biogenic	kg CO_2 eq	7,45E-03	7,19E-03	2,58E-04	0,00E+00
Climate Change - Fossil	kg CO_2 eq	3,50E+01	3,00E+01	3,40E-01	4,68E+00
Climate change - Land use and land use change	kg CO_2 eq	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acidification	mole H+ eq	2,01E-01	1,96E-01	2,03E-03	2,35E-03
Ozone depletion	kg CFC 11 eq	4,08E-07	4,02E-07	5,00E-09	4,16E-11
Eutrophication, freshwater	kg P eq	4,09E-04	2,85E-04	2,97E-05	9,42E-05
Eutrophication, marine	kg N eq	5,12E-02	4,88E-02	9,18E-04	1,53E-03
Eutrophication, terrestrial	mole N eq	4,61E-01	4,42E-01	9,58E-03	1,01E-02
Photochemical ozone formation	kg NMVOC eq	1,23E-01	1,17E-01	1,88E-03	3,43E-03
Particulate matter	Disease incidences	2,31E-06	2,26E-06	2,66E-08	2,30E-08
Ionizing radiation, human health	kBq U235 eq	4,95E+01	4,93E+01	7,71E-02	4,08E-02
Resource use, fossils	MJ	4,89E+02	4,79E+02	5,75E+00	4,35E+00
Resource use, mineral and metals	kg Sb eq	6,74E-04	6,72E-04	9,78E-07	4,49E-07
Land use	dimensionless (pt)	1,96E+01	2,89E+00	1,67E+01	0,00E+00

L281
Insulation stripping

Climate change

These charts show the overall impact of the product on climate change – total. The Distribution & Use phase is the lifecycle phase with the biggest overall impact of the maintenance free reference product. Different operating conditions can lead to deviations from the reference scenario.



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