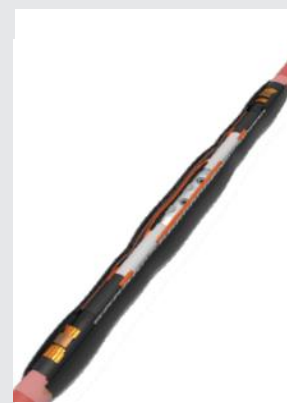


## Product Environmental Profile

**Product family name:** 24JTS W 70-1000 MM2 24kV CWS  
1C unarmored

**Reference product name:** 24JTS1.240W 70-240MM2 24kV  
CWS 1C unarmored



10,26  
kg CO<sub>2</sub> eq.  
Climate change - total



0,000003  
kg Sb eq.  
Resource use - minerals &  
metals (ADPe)



0,0310  
m<sup>3</sup>  
Net use of fresh water



342  
MJ  
Total Primary Energy

The above environmental impacts are "cradle to gate" or "Manufacturing phase" values (A1-A3)

|                                                                                                               |                      |                                  |                                                                                       |
|---------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------|---------------------------------------------------------------------------------------|
| PEP ecopassport N°:                                                                                           | NXNS-00749-V01.01-EN | Product Category Rules:          | PEP-PCR-ed4-EN-2021 09 06                                                             |
|                                                                                                               |                      | Product Specific Rules:          | PSR-0001-ed4-EN-2022 11 16                                                            |
| Verifier accreditation N°:                                                                                    | VH42                 | Program information & documents: | <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>                  |
| Date of publication:                                                                                          | 11-2025              | Validity period:                 | 5 years                                                                               |
| <b>Independent verification of the declaration and data, in accordance with ISO 14025 : 2006</b>              |                      |                                  |                                                                                       |
| Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>                                |                      |                                  |                                                                                       |
| The PCR critical review was conducted by a panel of experts chaired by Julie Orgelet (Ddomain).               |                      |                                  |  |
| PEP are compliant with XP C08-100-1 :2016 or EN 50693                                                         |                      |                                  |                                                                                       |
| The elements of the present PEP cannot be compared with elements from another program.                        |                      |                                  |                                                                                       |
| Compliant with ISO 14025: 2006 "Environmental labels and declarations - Type III environmental declarations". |                      |                                  |                                                                                       |

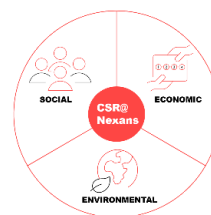
REALIZED BY: LORENZA DELL'OSA  
CONTRADA TESINO 181 B - 63073 OFFIDA (AP)- ITALY  
lorenza.dell\_osa@nexans.com 00390736888902

<https://www.nexans.com/csr.html>



### Nexans Corporate Social Responsibility commitment

Corporate Social Responsibility which is the confluence between environmental, economic and social aspects, is an integral part of the Nexans's strategy. Nexans has been supporting the **United Nations Global Compact** since December 2008 and has implemented internal action plans to integrate Sustainable Development at all levels. It includes responsible governance, healthy and safe working environment for employees, reduced global carbon footprint through the **Nexans Carbon Neutrality strategy**.



### Reference Product description

#### 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored

HEAT SHRINK MV STRAIGHT JOINTS FOR UNARMORED SINGLE CORE POLYMERIC CABLES WITH Cu WIRE SCREEN

### Products covered:

The aforementioned products belong to the category Power accessories of the Product Specific Rules (PSR) from the PEP ecopassport® program.

The PEP concern all the products in the range 24JTS W 70-1000 MM2 24kV CWS 1C unarmored and the reference product of the PEP is 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored.

### Functional unit:

To connect together the power transmission cables, or connect them to equipments, for one packaging unit, under operating conditions identical to those of the cable, namely: 1A during 40 years, with a use rate of 100%, according to the standards in force detailed in the data sheet available on our website [www.nexans.com](http://www.nexans.com).

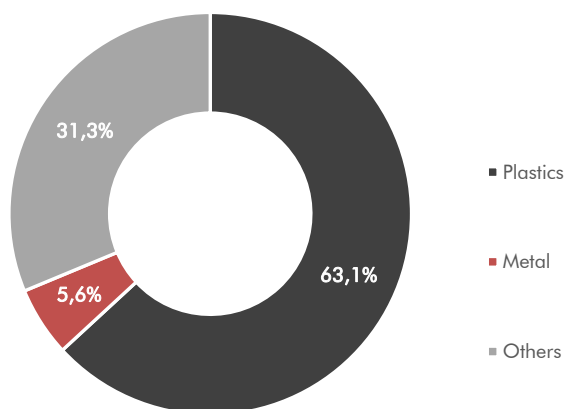
Lifetime and use rate correspond to the Infrastructure-Power networks application as defined in the table given in Appendix 1 of the specific rules for wires, cables and accessories.

This PEP has been drawn up considering the following parameters:

- 1 packaging unit for manufacturing, distribution, installation and end-of-life stages;
- 1 packaging unit and 1 A for the use stage

The potential impact of the use stage, estimated as Joule losses, shall be calculated by the PEP user as a function of the actual amperage during the use of the product by multiplying the impact considered by the square of the intensity. This PEP is valid in the intensity range taking into account the maximum permissible intensity.

### Constituent materials



The total mass of the reference product and packaging is 1437g. Constituent materials are distributed as given in the graph.

Nexans has implemented necessary procedures to ensure product compliance with the relevant standards when products are put on the market.



## II. LIFE CYCLE ASSESSMENT

### Manufacturing



- All the products in the range are manufactured in Italy.
- The electricity mix model for the manufacturing stage is Italy  $\leq 1$  kV.
- All Nexans sites in Italy have implemented a certified Environmental Management System according to ISO14001 standard.

#### Packaging designed to reduce environmental impacts:

- Packaging was designed according to the applicable standard (Directive 94/62/EC).
- The packaging considered to transport the reference product is a SC202. It is considered to be used 1 time.

### Distribution



The transportation scenario for the impact assessment of the distribution stage is intracontinental, considering:

- 3500 km covered by truck.
- 0 km covered by boat.

### Installation



Installation processes for the reference product are considered out of the scope of the study, according to the Product Specific Rules document for "Wires, Cables and Accessories" from PEP ecopassport® program. Only packaging disposal is considered at this stage.

### Use



The use scenario considers the operation of the reference product in Infrastructure - Power networks, with:

- |                                       |                        |   |
|---------------------------------------|------------------------|---|
| • Reference Lifetime (RLT) = 40 years | • Use rate = 100 %     |   |
| • Current intensity: 1A               | • Resistance (Ohm)*: 1 | 0 |
| • Number of active conductor(s): 1    |                        |   |

(\*According to the default value provided in the PSR document)

**Considering the aforementioned hypotheses, the energy consumption over the RLT at use stage is 350,4 kWh.**

*This value is calculated for  $I=1$  A. For the effective consumption of the accessory installed, multiply the value given by the square intensity.*

- The electricity mix considered at use stage is Europe  $> 1$  kV.
- No maintenance is necessary to ensure the operation of the cable during the considered reference lifetime.

The reference lifetime mentioned in this PEP corresponds to an average data used for impact calculation, taking into account the average time a cable might be installed in a system before being disposed. **It CANNOT BE considered as an equivalent to the guaranteed product technical lifetime.**

### End-of-life



- The transportation scenario chosen for the impact analysis associated with end-of-life stage is 1000 km covered by truck.
- Accessory end-of-life stage includes also a step of manual separation from the equipment (cable, transformer, etc.) and the separated materials are then assumed to be recycled, incinerated or landfilled.



### III. ENVIRONMENTAL IMPACTS

The reference product 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored belongs to the Product Category Rules (PEP-PCR-ed4-EN-2021 09 06) and Product Specific Rules (PSR-0001-ed4-EN-2022 11 16) from the PEP ecopassport® program. According to the PCR, the life cycle impact assessment of the reference product takes into account manufacturing, distribution, installation, use and end-of-life stages.

All the necessary hypotheses to evaluate the environmental impacts of the reference product lifecycle are presented in the previous sections (electricity mix models, use scenario, etc). The software used to perform the evaluation is EIME 6.3.2-4, with the Nexans-2025-04 database.

Representativeness: the study is representative of accessories production in Italy with an intracontinental scenario for distribution. The electricity model for use is Europe >1 kV and the model for end-of-life is Europe >1 kV.

#### Impact results for 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored

##### Mandatory indicators:

| Environmental indicator/flows                                                                               | Unit                                 | A1-Raw materials | A2-Transport to manufacturer | A3-Manufacturing process | Total A1-A3 | A4-Distribution to customer | A5-Installation* | B6-Utilization (for 1 A) | End-of-life (C1-C4) | TOTAL     |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|------------------------------|--------------------------|-------------|-----------------------------|------------------|--------------------------|---------------------|-----------|
| Climate change - total (GWP)                                                                                | kg CO <sub>2</sub> eq.               | 5,88E-01         | 1,45E-01                     | 9,53E+00                 | 1,03E+01    | 2,39E-01                    | 1,16E+00         | 1,18E+02                 | 9,52E-01            | 1,40E+02  |
| Climate change - fossil (GWPf)                                                                              | kg CO <sub>2</sub> eq.               | 5,88E-01         | 1,45E-01                     | 1,00E+01                 | 1,08E+01    | 2,39E-01                    | 1,16E+00         | 1,18E+02                 | 9,52E-01            | 1,41E+02  |
| Climate change - biogenic (GWPb)                                                                            | kg CO <sub>2</sub> eq.               | 5,65E-04         | 5,20E-07                     | -5,13E-01                | -5,12E-01   | 9,77E-07                    | 9,46E-08         | 2,17E-01                 | 1,11E-04            | -8,08E-01 |
| Climate change - land use & land use change (GWPlu)                                                         | kg CO <sub>2</sub> eq.               | 1,27E-06         | 1,92E-07                     | 1,32E-07                 | 1,59E-06    | 3,61E-07                    | 3,50E-08         | 0,00E+00                 | 6,82E-08            | 2,38E-06  |
| Ozone layer depletion (ODP)                                                                                 | kg CFC-11 eq.                        | 4,42E-07         | 1,56E-09                     | 2,56E-07                 | 7,00E-07    | 2,89E-09                    | 1,09E-07         | 5,70E-07                 | 2,61E-09            | 1,64E-06  |
| Acidification potential of soil and water (AP)                                                              | mol H <sup>+</sup> eq.               | 2,93E-03         | 9,41E-04                     | 5,00E-02                 | 5,39E-02    | 3,77E-04                    | 2,43E-03         | 6,03E-01                 | 8,25E-04            | 7,12E-01  |
| Eutrophication - freshwater (Epf)                                                                           | kg PO <sub>4</sub> <sup>3-</sup> eq. | 5,35E-07         | 4,81E-07                     | 3,69E-05                 | 3,79E-05    | 8,92E-07                    | 1,48E-05         | 3,10E-04                 | 7,74E-06            | 4,09E-04  |
| Eutrophication - marine (Epm)                                                                               | kg N eq.                             | 5,04E-04         | 2,06E-04                     | 6,61E-03                 | 7,32E-03    | 6,83E-05                    | 3,47E-04         | 7,35E-02                 | 1,36E-04            | 8,82E-02  |
| Eutrophication - terrestrial (Ept)                                                                          | mol N eq.                            | 5,45E-03         | 2,25E-03                     | 9,92E-02                 | 1,07E-01    | 7,50E-04                    | 3,82E-03         | 1,18E+00                 | 1,85E-03            | 1,40E+00  |
| Photochemical ozone formation - human health (POCP)                                                         | kg NMVOC eq.                         | 2,76E-03         | 6,07E-04                     | 2,03E-02                 | 2,37E-02    | 2,42E-04                    | 1,30E-03         | 2,31E-01                 | 4,03E-04            | 2,78E-01  |
| Resource use - minerals & metals (ADPe)                                                                     | kg Sb eq.                            | 2,59E-08         | 4,60E-08                     | 3,29E-06                 | 3,36E-06    | 8,51E-08                    | 1,19E-08         | 4,16E-05                 | 2,67E-08            | 4,85E-05  |
| Resource use - fossils (ADPf)                                                                               | MJ                                   | 3,07E+01         | 2,48E+00                     | 2,44E+02                 | 2,77E+02    | 4,24E+00                    | 1,44E+01         | 2,97E+03                 | 3,50E+00            | 3,52E+03  |
| Water use (WU)                                                                                              | m <sup>3</sup> eq.                   | 2,08E-01         | 4,63E-03                     | 1,11E+00                 | 1,32E+00    | 8,59E-03                    | 3,37E-02         | 9,02E+00                 | 7,89E-02            | 1,16E+01  |
| Use of renewable primary energy excluding renewable primary energy used as raw material (PERE)              | MJ                                   | 6,78E-02         | 7,40E-03                     | 5,86E+01                 | 5,86E+01    | 1,34E-02                    | 2,74E-02         | 7,86E+02                 | 4,22E-01            | 9,04E+02  |
| Use of renewable primary energy used as raw material (PERM)                                                 | MJ                                   | 0,00E+00         | 0,00E+00                     | 6,74E+00                 | 6,74E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 1,35E+01  |
| Total use of renewable primary energy resources (PERT)                                                      | MJ                                   | 6,78E-02         | 7,40E-03                     | 6,53E+01                 | 6,54E+01    | 1,34E-02                    | 2,74E-02         | 7,86E+02                 | 4,22E-01            | 9,18E+02  |
| Non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE) | MJ                                   | 2,14E+01         | 2,48E+00                     | 2,40E+02                 | 2,64E+02    | 4,24E+00                    | 2,41E+00         | 2,97E+03                 | 3,50E+00            | 3,49E+03  |
| Use of non renewable primary energy resources used as raw materials (PENRM)                                 | MJ                                   | 9,32E+00         | 0,00E+00                     | 4,21E+00                 | 1,35E+01    | 0,00E+00                    | 1,20E+01         | 0,00E+00                 | 0,00E+00            | 2,97E+01  |
| Total use of non-renewable primary energy resources (PENRT)                                                 | MJ                                   | 3,07E+01         | 2,48E+00                     | 2,44E+02                 | 2,77E+02    | 4,24E+00                    | 1,44E+01         | 2,97E+03                 | 3,50E+00            | 3,52E+03  |
| Use of secondary material (SM)                                                                              | kg                                   | 0,00E+00         | 0,00E+00                     | 0,00E+00                 | 0,00E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 0,00E+00  |
| Use of renewable secondary fuels (RSF)                                                                      | MJ                                   | 0,00E+00         | 0,00E+00                     | 0,00E+00                 | 0,00E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 0,00E+00  |
| Use of non renewable secondary fuels (NRSF)                                                                 | MJ                                   | 0,00E+00         | 0,00E+00                     | 0,00E+00                 | 0,00E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 0,00E+00  |
| Net use of fresh water (FW)                                                                                 | m <sup>3</sup>                       | 4,84E-03         | 1,08E-04                     | 2,60E-02                 | 3,10E-02    | 2,00E-04                    | 7,85E-04         | 2,12E-01                 | 1,84E-03            | 2,72E-01  |
| Hazardous waste disposed (HWD)                                                                              | kg                                   | 1,16E-01         | 5,31E-04                     | 4,57E-01                 | 5,74E-01    | 9,98E-04                    | 8,08E-04         | 5,16E+00                 | 2,17E-03            | 6,19E+00  |
| Non hazardous waste disposed (NHWD)                                                                         | kg                                   | 4,44E-02         | 1,23E-02                     | 1,90E+00                 | 1,96E+00    | 2,21E-02                    | 5,74E-01         | 1,99E+01                 | 5,38E-01            | 2,49E+01  |
| Radioactive waste disposed                                                                                  | kg                                   | 4,28E-05         | 9,72E-06                     | 4,81E-04                 | 5,33E-04    | 1,75E-05                    | 6,76E-05         | 4,56E-03                 | 3,19E-05            | 5,70E-03  |
| Components for reuse (CRU)                                                                                  | kg                                   | 0,00E+00         | 0,00E+00                     | 0,00E+00                 | 0,00E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 0,00E+00  |
| Materials for recycling (MFR)                                                                               | kg                                   | 0,00E+00         | 0,00E+00                     | 3,33E-02                 | 3,33E-02    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 1,71E-01            | 2,38E-01  |
| Materials for energy recovery (MER)                                                                         | kg                                   | 0,00E+00         | 0,00E+00                     | 2,44E-02                 | 2,44E-02    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 4,87E-02  |
| Exported Energy (EE)                                                                                        | MJ                                   | 0,00E+00         | 0,00E+00                     | 0,00E+00                 | 0,00E+00    | 0,00E+00                    | 0,00E+00         | 0,00E+00                 | 0,00E+00            | 0,00E+00  |

\* Installation stage includes only packaging disposal. Impacts related to installation processes might be completed by the PEP user.

Note: As mentioned in the PSR0001: B1, B2, B3,B4,B5 & B7 stages are not applicables for this product category

| Environmental indicator/flows | Unit | Total |
|-------------------------------|------|-------|
|-------------------------------|------|-------|

|                                               |         |          |
|-----------------------------------------------|---------|----------|
| Biogenic carbon content - product (BC-pro)    | kg of C | 0,00E+00 |
| Biogenic carbon content - packaging (BC-pack) | kg of C | 0,00E+00 |

Biogenic carbon storage is calculated according to the 0/0 assessment methodology.

Optional indicators:

| Environmental indicator/flow complete name | Unit               | A1-Raw materials | A2-Transport to manufacturer | A3-Manufacturing process | Total A1-A3 | A4-Distribution to customer | A5-Installation* | B6-Utilization (for 1 A) | End-of-life (C1-C4) | TOTAL    |
|--------------------------------------------|--------------------|------------------|------------------------------|--------------------------|-------------|-----------------------------|------------------|--------------------------|---------------------|----------|
| Total Primary Energy (TPE)                 | MJ                 | 3,07E+01         | 2,49E+00                     | 3,09E+02                 | 3,42E+02    | 4,25E+00                    | 1,44E+01         | 3,76E+03                 | 3,92E+00            | 4,12E+03 |
| EF-particulate matter (EF-PM)              | Disease occurrence | 1,48E-08         | 5,56E-09                     | 3,94E-07                 | 4,14E-07    | 3,23E-09                    | 1,40E-08         | 4,85E-06                 | 5,91E-09            | 5,29E-06 |
| Ionising radiation, human health (IR)      | kg U235 eq.        | 2,02E-01         | 4,53E-03                     | 1,47E+01                 | 1,49E+01    | 8,44E-03                    | 6,19E-03         | 1,69E+02                 | 1,27E-01            | 1,84E+02 |
| Ecotoxicity, freshwater (Eco-fw)           | CTUe               | 4,06E+00         | 3,72E+00                     | 3,19E+01                 | 3,97E+01    | 6,96E+00                    | 2,22E+00         | 2,22E+02                 | 1,97E+00            | 2,73E+02 |
| Human toxicity, cancer (HT-c)              | CTUh-c             | 2,07E-10         | 2,52E-11                     | 5,68E-08                 | 5,70E-08    | 4,68E-11                    | 8,33E-08         | 1,48E-08                 | 2,97E-11            | 1,55E-07 |
| Human toxicity, non-cancer (HT-nc)         | CTUh-nc            | 2,46E-09         | 4,81E-10                     | 3,37E-08                 | 3,67E-08    | 8,92E-10                    | 8,91E-10         | 3,54E-07                 | 5,44E-10            | 3,93E-07 |
| Land use (LU)                              | No dimension       | 4,42E-03         | 5,44E-04                     | 3,24E-01                 | 3,29E-01    | 1,02E-03                    | 9,89E-05         | 3,26E+00                 | 1,98E-04            | 3,59E+00 |

Environmental indicators are calculated according to JRC method - EF3.0.

\* Installation stage includes only packaging disposal. Impacts related to installation processes might be completed by the PEP user.



#### IV. EXTRAPOLATION RULES FOR THE PRODUCT FAMILY 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored

##### General information

The extrapolation rules have been calculated based on the environment impact assessment results of 3 products in the range 24JTS W 70-1000 MM2 24kV CWS 1C unarmored. The reference product is 24JTS1.240W 70-240MM2 24kV CWS 1C unarmored.

The extrapolation rules below apply to a connection point of product. In the following section, the product weight is expressed in g.

##### Extrapolation rules for each life cycle stage

|  | Life cycle stage | Applicable extrapolation principle | Formula to calculate each environmental indicator                                                                                                                                                                                                                                                                                                            | Example: If the product weight is 960 g and has 15 connection points, each indicator value shall be calculated with: | Mean deviation of extrapolation rule |
|--|------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------|
|  | Manufacturing    | Linear variation versus weight     | Indicator = (a x product weight + b) / number of connection points                                                                                                                                                                                                                                                                                           | Indicator = ((960 x a) + b) / 15.                                                                                    | 6,11%                                |
|  | Distribution     | Linear variation versus weight     | Indicator = (a x product weight + b) / number of connection points                                                                                                                                                                                                                                                                                           | Indicator = ((960 / 950) x indicator value of reference product) / 15                                                | 0,93%                                |
|  | Installation     | -                                  | Indicator = (a x product weight + b) / number of connection points                                                                                                                                                                                                                                                                                           | Indicator = (960 x a + b) / 15                                                                                       | N/A                                  |
|  | Use              | -                                  | <p>There is no extrapolation principle applicable to the use stage.</p> <p>In this study the use phase impacts were calculated with a current intensity of 1A.</p> <p>In order to find the environmental impacts specific to your application during the use phase of the product, multiply each use phase impact by the square of the current intensity</p> | -                                                                                                                    | 0,00%                                |
|  | End of life      | -                                  | Indicator = (a x product weight + b) / number of connection points                                                                                                                                                                                                                                                                                           | Indicator = ((960 / 950) x indicator value of reference product) / 15                                                | 0,00%                                |