

Product Environmental Profile

Family technical name: Indoor/Outdoor loose tube

Family brand name: GRHQ, QXXI & FZOMSU-SD

Reference product name : GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub)



0,036

kg CO₂ eq.

Climate change - total



7,88E-09

kg Sb eq.

Resource use - minerals & metals (ADPe)



3,84E-04

m³

Net use of fresh water



1,130

MJ

Total Primary Energy

The above environmental impacts are "cradle to gate" or "Manufacturing phase" values (A1-A3) and one communication signal (one optical fibre) for 1 m of reference product (functional unit).

PEP ecopassport N°:	NXNS-00798-V01.01-EN	Product Category Rules:	PEP-PCR-ed4-EN-2021 09 06
Verifier accreditation N°:	VH08	Product Specific Rules:	PSR-0001-ed4-EN-2022 11 16
Date of publication:	07-2026	Program information & documents:	www.pep-ecopassport.org
		Validity period:	5 years
Independent verification of the declaration and data, in accordance with ISO 14025 : 2006			
Internal ☐ External ☒			
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: Robert Lindqvist
SE-514 81 GRIMSÅS - Sweden
robert.lindqvist@nexans.com

+4632580000

<https://www.nexans.com>



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

GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub)

GRHQ is loose tube fibre optical cable. The cable type is intended for use in regional, urban, area and property networks.

Products covered:

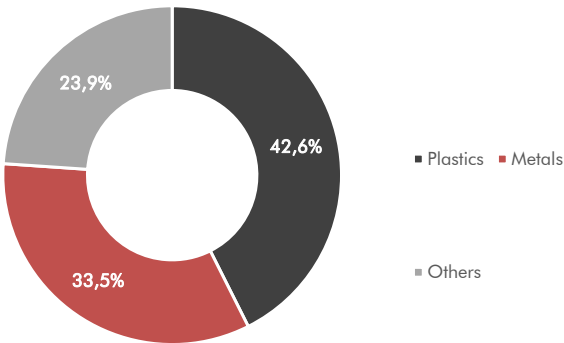
The aforementioned products belong to the category communication and data wires & cables of the Product Specific Rules (PSR) for Wires, Cables and Accessories (PSR-0001) of the PEP ecopassport® program.

The PEP concern all the products in the range Indoor/Outdoor loose tube and the reference product of the PEP is GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub).

Functional unit:

To transmit one communication signal on 1 m cable according to protocol, 10GBASE-LR, during 20 years and a 100% use rate in accordance with the standards in force, detailed in the data sheet available on our website www.nexans.com. Lifetime and use rate correspond to the Infrastructure - Telecom network (fixed and mobile) application as defined in the table given in Appendix 1 of the specific rules for wires, cables and accessories.

Constituent materials



The total mass of the reference product and packaging is 58,15 g/m. 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 Indoor/Outdoor loose tube are manufactured in Sweden.
- The electricity mix model for the manufacturing stage is from Sweden >1 kV.
- The reference year for the collected LCI is 2025
- All Nexans sites in Sweden 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 K9. It is considered to be used 4 times.

Distribution



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

- 1000 km covered by truck.

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 5% of product losses and packaging disposal is considered in this stage

Use



The use scenario considers the operation of the reference product in Infrastructure - Telecom network (fixed and mobile), with:

- | | | |
|---------------------------------------|-------------------|-------------|
| • Reference Lifetime (RLT) = 20 years | • Use rate = 100% | |
| • Protocol: 10GBASE-LR | • Type: | Single mode |

Considering the aforementioned hypotheses, the energy consumption over the RLT at use stage is 0,0001 kWh/m.

- The electricity mix considered at use stage is Sweden ≤ 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.
- The assumed electricity mix model for end-of-life stage is Sweden ≤ 1 kV.

The cables are recycled through a grinding process for the separation of polymers and metal parts. The separated materials are then assumed to be recycled, incinerated or landfilled according to default scenarios given in the PCR.

If the customer wants to recycle their cables at the end-of-life, Nexans has the know-how of cables recycling at their end-of-life through the structure named Nexans Recycling Services (recycling.services@nexans.com), to offer a complete solution for the recycling of polymers and metals.



III. ENVIRONMENTAL IMPACTS

The reference product GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub) 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 6.3.5-6, with the Nexans-2025-04 database.

Representativeness: the study is representative of cable production in Sweden with a local scenario for distribution. The electricity model for use is Sweden ≤ 1 kV and the model for end-of-life is Sweden ≤ 1 kV.

Impact results for one communication signal (one optical fibre) and 1 m of GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub)

Mandatory indicators:

Environmental indicator/flows	Unit	A1-Raw materials	A2-Transport to manufacturer	A3-Manufacturing process	Total manufacturing A1-A3	A4-Distribution to customer	A5-Installation*	B6-Use	C1-C4-End of life	TOTAL
Climate change - total (GWP)	kg CO ₂ eq.	2,24E-02	3,03E-03	1,06E-02	3,61E-02	8,41E-04	3,94E-03	5,30E-07	6,62E-03	4,75E-02
Climate change - fossil (GWPf)	kg CO ₂ eq.	2,21E-02	3,03E-03	1,16E-02	3,67E-02	8,41E-04	2,39E-03	3,69E-07	6,55E-03	4,65E-02
Climate change - biogenic (GWPb)	kg CO ₂ eq.	2,86E-04	7,19E-09	-9,38E-04	-6,52E-04	3,44E-09	1,55E-03	1,61E-07	6,96E-05	9,67E-04
Climate change - land use & land use change (GWPlu)	kg CO ₂ eq.	8,93E-08	2,66E-09	3,13E-10	9,23E-08	1,27E-09	4,70E-09	0,00E+00	2,90E-09	1,01E-07
Ozone layer depletion (ODP)	kg CFC-11 eq.	3,91E-09	2,29E-11	3,58E-10	4,29E-09	1,02E-11	2,32E-10	9,43E-15	3,47E-10	4,88E-09
Acidification potential of soil and water (AP)	mol H+ eq.	1,15E-04	5,43E-05	6,16E-05	2,31E-04	1,33E-06	1,39E-05	8,04E-09	2,76E-05	2,74E-04
Eutrophication - freshwater (Eptf)	kg PO43- eq.	3,41E-07	6,99E-09	3,63E-07	7,11E-07	3,14E-09	3,57E-08	2,12E-11	2,39E-08	7,74E-07
Eutrophication - marine (Epm)	kg N eq.	1,70E-05	1,23E-05	1,28E-05	4,21E-05	2,41E-07	2,54E-06	7,02E-10	4,03E-06	4,89E-05
Eutrophication - terrestrial (Ept)	mol N eq.	1,83E-04	1,34E-04	1,92E-04	5,10E-04	2,64E-06	3,14E-05	3,01E-08	5,57E-05	5,99E-04
Photochemical ozone formation - human health (POCP)	kg NMVOC eq.	8,73E-05	3,50E-05	4,24E-05	1,65E-04	8,54E-07	9,51E-06	1,55E-09	1,35E-05	1,88E-04
Resource use - minerals & metals (ADPe)	kg Sb eq.	6,15E-10	6,71E-10	6,59E-09	7,88E-09	3,00E-10	5,32E-10	2,45E-12	1,80E-09	1,05E-08
Resource use - fossils (ADPf)	MJ	5,81E-01	4,69E-02	3,21E-01	9,49E-01	1,49E-02	5,65E-02	8,40E-05	1,14E-01	1,13E+00
Water use (WU)	m3 eq.	1,29E-02	6,73E-05	3,51E-03	1,64E-02	3,03E-05	8,62E-04	2,92E-07	1,27E-03	1,86E-02
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,80E-03	1,18E-04	1,57E-01	1,61E-01	4,71E-05	9,06E-03	6,13E-05	2,08E-02	1,91E-01
Use of renewable primary energy used as raw material (PERM)	MJ	0,00E+00	0,00E+00	1,98E-02	1,98E-02	0,00E+00	9,92E-04	0,00E+00	0,00E+00	2,08E-02
Total use of renewable primary energy resources (PERT)	MJ	3,80E-03	1,18E-04	1,77E-01	1,81E-01	4,71E-05	1,01E-02	6,13E-05	2,08E-02	2,12E-01
Non-renewable primary energy excluding non-renewable primary energy resources used as raw	MJ	3,26E-01	4,69E-02	3,18E-01	6,91E-01	1,49E-02	4,43E-02	8,40E-05	1,14E-01	8,64E-01
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	2,55E-01	0,00E+00	2,62E-03	2,58E-01	0,00E+00	1,21E-02	0,00E+00	0,00E+00	2,70E-01
Total use of non-renewable primary energy resources (PENRT)	MJ	5,81E-01	4,69E-02	3,21E-01	9,49E-01	1,49E-02	5,65E-02	8,40E-05	1,14E-01	1,13E+00
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)	m3	2,99E-04	1,57E-06	8,31E-05	3,84E-04	7,05E-07	2,03E-05	6,84E-09	3,51E-05	4,40E-04
Hazardous waste disposed (HWD)	kg	4,12E-04	7,35E-06	4,00E-04	8,19E-04	3,52E-06	2,94E-04	1,12E-07	1,19E-03	2,30E-03
Non hazardous waste disposed (NHWD)	kg	5,96E-03	2,01E-04	1,65E-03	7,81E-03	7,81E-05	5,01E-04	4,89E-07	1,51E-03	9,90E-03
Radioactive waste disposed	kg	1,17E-06	1,55E-07	2,60E-07	1,59E-06	6,18E-08	1,12E-07	2,87E-11	3,31E-07	2,09E-06
Components for reuse (CRU)	kg	0,00E+00	0,00E+00	1,06E-03	1,06E-03	0,00E+00	5,31E-05	0,00E+00	0,00E+00	1,12E-03
Materials for recycling (MFR)	kg	0,00E+00	0,00E+00	3,00E-04	3,00E-04	0,00E+00	3,27E-04	0,00E+00	5,95E-03	6,58E-03
Materials for energy recovery (MER)	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,71E-05	0,00E+00	3,43E-04	3,60E-04
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 5% product losses & packaging disposal. Impacts related to installation processes might be completed by the PEP user.

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	4,13E-01

Biogenic carbon storage is calculated according to the -1/+1 assessment methodology & according to EN 16485.

Optional indicators:

Environmental indicator/flow	Unit	A1-Raw materials	A2-Transport to manufacturer	A3-Manufacturing process	Total A1-A3	A4-Distribution to customer	A5-Installation*	B6-Use	C1-C4-End of life	TOTAL
Total Primary Energy (TPE)	MJ	5,85E-01	4,71E-02	4,98E-01	1,13E+00	1,50E-02	6,65E-02	1,45E-04	1,35E-01	1,35E+00
EF-particulate matter (EF-PM)	Disease occurrence	7,86E-10	2,90E-10	5,99E-10	1,68E-09	1,14E-11	1,00E-10	1,36E-13	2,04E-10	1,99E-09
Ionising radiation, human health (IR)	kg U235 eq.	1,79E-01	6,47E-05	3,02E-02	2,09E-01	2,98E-05	1,03E-02	1,15E-05	4,45E-03	2,24E-01
Ecotoxicity, freshwater (Eco-fw)	CTUe	2,09E-01	5,20E-02	5,27E-02	3,14E-01	2,45E-02	2,75E-02	2,93E-06	1,02E-01	4,68E-01
Human toxicity, cancer (HT-c)	CTUh-c	6,31E-12	3,62E-13	1,56E-12	8,23E-12	1,65E-13	4,77E-13	9,01E-17	1,13E-12	1,00E-11
Human toxicity, non-cancer (HT-nc)	CTUh-nc	1,53E-10	6,98E-12	2,78E-11	1,88E-10	3,14E-12	1,30E-11	3,08E-15	4,20E-11	2,46E-10
Land use (LU)	No dimension	2,17E-03	7,51E-06	3,38E-04	2,51E-03	3,60E-06	1,28E-04	1,15E-07	1,12E-04	2,76E-03

Environmental indicators are calculated according to JRC method - EF3.1.



V. EXTRAPOLATION RULES FOR THE PRODUCT FAMILY GRHQ, QXXI & FZOMSU-SD

General information

The extrapolation rules have been calculated based on the environment impact assessment results of 3 products in the range Indoor/Outdoor loose tube. The reference product is GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub). The weight of reference product is 53,9 g/m.

Functional unit: Extrapolation rules for each life cycle stage

The extrapolation rules below apply to one communication signal (one optical fibre) and 1m of cable. In the following sections, the product weight is expressed in g for 1m of cable, where applicable.

	Life cycle stage	Applicable extrapolation principle	Formula to calculate each environmental indicator	Example: If the product weight is 63,9 g/m and the fibre count is 4, each indicator value shall be calculated with:	Mean deviation of extrapolation rule
	A1-Raw materials	Linear variation versus weight	Indicator = ((a x Cable weight) + b) ÷ Fibre count	Indicator = ((a x 63,9) + b) ÷ 4	0,48%
	A2-Transport to manufacturer	Linear variation versus weight	Indicator = ((a x Cable weight) + b) ÷ Fibre count	Indicator = ((a x 63,9) + b) ÷ 4	0,12%
	A3-Manufacturing process	Linear variation versus weight	Indicator = ((a x Cable weight) + b) ÷ Fibre count	Indicator = ((a x 63,9) + b) ÷ 4	10,00%
	A4-Distribution to customer	Linear variation versus weight	Indicator = ((a x Cable weight) + b) ÷ Fibre count	Indicator = ((a x 63,9) + b) ÷ 4	4,57%
	A5-Installation	Maximum impact value	Indicator = a	Indicator = a	-
	B6-Use	Maximum impact value	Indicator = a	Indicator = a	-
	C1-C4-End of life	Linear variation versus weight	Indicator = ((a x Cable weight) + b) ÷ Fibre count	Indicator = ((a x 63,9) + b) ÷ 4	0,17%

Declared unit: Extrapolation rules for each life cycle stage

The extrapolation rules below apply to one communication signal (one optical fibre) and 1m of cable. In the following sections, the product weight is expressed in g for 1m of cable, where applicable.

	Life cycle stage	Applicable extrapolation principle	Formula to calculate each environmental indicator	Example: If the product weight is 63,9 g/m and the fibre count is 4, each indicator value shall be calculated with:	Mean deviation of extrapolation rule
	A1-Raw materials	Linear variation versus weight	Indicator = (a x Cable weight) + b	Indicator = (a x 63,9) + b	0,48%
	A2-Transport to manufacturer	Linear variation versus weight	Indicator = (a x Cable weight) + b	Indicator = (a x 63,9) + b	0,12%
	A3-Manufacturing process	Linear variation versus weight	Indicator = (a x Cable weight) + b	Indicator = (a x 63,9) + b	10,00%
	A4-Distribution to customer	Linear variation versus weight	Indicator = (a x Cable weight) + b	Indicator = (a x 63,9) + b	4,57%
	A5-Installation	Maximum impact value	Indicator = a x Fibre count	Indicator = a x 4	-
	B6-Use	Maximum impact value	Indicator = a x Fibre count	Indicator = a x 4	-
	C1-C4-End of life	Linear variation versus weight	Indicator = (a x Cable weight) + b	Indicator = (a x 63,9) + b	0,17%

Table to be considered for extrapolation calculations of different life cycle stages:

	A1-Raw materials		A2-Transport to manufacturer		A3-Manufacturing process		A4-Distribution to customer		A5-Installation	B6-Use	C1-C4 End of life	
	a	b	a	b	a	b	a	b	a	a	a	b
GWP	2,06E-03	-2,20E-02	2,09E-04	8,58E-04	8,59E-03	-4,13E-01	5,79E-05	4,93E-04	8,46E-02	5,30E-07	4,67E-04	1,21E-03
GWPf	2,06E-03	-2,29E-02	2,09E-04	8,58E-04	8,52E-03	-4,04E-01	5,79E-05	4,93E-04	6,83E-02	3,69E-07	4,62E-04	1,20E-03
GWPb	4,86E-06	8,82E-04	5,92E-10	-3,21E-09	7,51E-05	-9,42E-03	2,37E-10	2,02E-09	1,63E-02	1,61E-07	4,97E-06	1,02E-05
GWPlu	4,48E-09	1,15E-07	2,19E-10	-1,18E-09	1,76E-11	4,90E-10	8,75E-11	7,45E-10	4,43E-08	0,00E+00	1,72E-10	2,33E-09
ODP	3,25E-10	-1,95E-09	1,83E-12	-7,44E-12	2,19E-10	-1,01E-08	7,02E-13	5,97E-12	3,83E-09	9,43E-15	1,97E-11	3,25E-10
AP	1,38E-05	-2,87E-04	2,81E-06	6,51E-05	2,52E-05	-1,07E-03	9,14E-08	7,78E-07	2,85E-04	8,04E-09	1,72E-06	1,71E-05
Epf	1,02E-08	8,12E-07	5,62E-10	-2,37E-09	2,68E-07	-1,27E-05	2,16E-10	1,84E-09	1,55E-06	2,12E-11	1,72E-09	2,79E-09
Epm	1,69E-06	-2,35E-05	6,31E-07	1,49E-05	7,08E-06	-3,20E-04	1,66E-08	1,41E-07	6,09E-05	7,02E-10	2,65E-07	1,80E-06
Epl	1,84E-05	-2,64E-04	6,91E-06	1,64E-04	7,43E-05	-3,13E-03	1,82E-07	1,55E-06	6,73E-04	3,01E-08	3,69E-06	2,32E-05
POCP	1,23E-05	-3,19E-04	1,81E-06	4,20E-05	2,59E-05	-1,19E-03	5,88E-08	5,00E-07	2,50E-04	1,55E-09	8,67E-07	6,96E-06
ADPe	4,78E-11	-1,28E-10	5,38E-11	-2,22E-10	3,84E-10	6,01E-09	2,06E-11	1,76E-10	5,68E-09	2,45E-12	1,19E-10	7,86E-10
ADPf	5,66E-02	-7,39E-01	3,36E-03	6,41E-03	8,32E-02	-3,10E+00	1,03E-03	8,74E-03	1,02E+00	8,40E-05	7,38E-03	5,71E-02
WU	8,43E-04	5,70E-03	5,41E-06	-2,30E-05	2,11E-03	-9,74E-02	2,08E-06	1,77E-05	1,88E-02	2,92E-07	7,41E-05	1,06E-03
PÈRE	1,40E-04	7,60E-03	9,10E-06	-1,81E-05	4,45E-03	3,91E-01	3,24E-06	2,76E-05	6,95E-02	6,13E-05	1,49E-03	2,63E-03
PERM	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,57E-04	5,08E-02	0,00E+00	0,00E+00	1,01E-02	0,00E+00	0,00E+00	0,00E+00
PERT	1,40E-04	7,60E-03	9,10E-06	-1,81E-05	5,41E-03	4,41E-01	3,24E-06	2,76E-05	7,96E-02	6,13E-05	1,49E-03	2,63E-03
PENRE	3,82E-02	-7,63E-01	3,36E-03	6,41E-03	8,31E-02	-3,11E+00	1,03E-03	8,74E-03	8,81E-01	8,40E-05	7,38E-03	5,71E-02
PENRM	1,84E-02	2,32E-02	0,00E+00	0,00E+00	1,35E-04	6,41E-03	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00
PENRT	5,66E-02	-7,39E-01	3,36E-03	6,41E-03	8,32E-02	-3,10E+00	1,03E-03	8,74E-03	1,02E+00	8,40E-05	7,38E-03	5,71E-02
SM	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	0,00E+00	0,00E+00	0,00E+00
RSF	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	0,00E+00	0,00E+00	0,00E+00
NRSF	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	0,00E+00	0,00E+00	0,00E+00
FW	1,96E-05	1,33E-04	1,26E-07	-5,35E-07	4,92E-05	-2,27E-03	4,85E-08	4,13E-07	4,40E-04	6,84E-09	1,94E-06	3,51E-05
HWD	5,96E-05	-1,58E-03	6,05E-07	-3,28E-06	3,65E-05	-3,10E-04	2,42E-07	2,06E-06	3,27E-03	1,12E-07	7,69E-05	5,84E-04
NHWD	3,82E-04	3,16E-03	1,53E-05	-2,42E-05	3,04E-04	-9,48E-03	5,37E-06	4,57E-05	6,70E-03	4,89E-07	8,61E-05	1,39E-03
RWD	1,11E-07	-1,34E-06	1,19E-08	-2,41E-08	1,26E-07	-5,58E-06	4,25E-09	3,62E-08	1,94E-06	2,87E-11	2,01E-08	2,36E-07
CRU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,48E-05	2,59E-03	0,00E+00	0,00E+00	5,63E-04	0,00E+00	0,00E+00	0,00E+00
MFR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,77E-05	2,41E-04	0,00E+00	0,00E+00	3,67E-03	0,00E+00	3,52E-04	4,78E-03
MER	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E-04	0,00E+00	1,72E-05	4,42E-04
EE	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	0,00E+00	0,00E+00	0,00E+00
TPE	5,68E-02	-7,32E-01	3,37E-03	6,39E-03	8,86E-02	-2,66E+00	1,03E-03	8,77E-03	1,10E+00	0,00E+00	8,87E-03	5,97E-02
EF-PM	7,65E-11	-9,99E-10	1,53E-11	3,33E-10	1,70E-10	-6,51E-09	7,84E-13	6,67E-12	1,85E-09	0,00E+00	1,30E-11	1,10E-10
IR	8,97E-03	2,30E-01	5,25E-06	-2,44E-05	1,36E-03	4,84E-02	2,05E-06	1,74E-05	9,45E-02	0,00E+00	3,18E-04	6,31E-04
Eco-fw	1,70E-02	-8,56E-02	4,26E-03	-2,19E-02	3,09E-02	-1,42E+00	1,69E-03	1,44E-02	4,57E-01	0,00E+00	6,66E-03	4,82E-02
HT-c	1,18E-12	-3,85E-11	2,93E-14	-1,30E-13	3,78E-13	-1,27E-11	1,13E-14	9,65E-14	1,04E-11	0,00E+00	7,55E-14	4,44E-13
HT-nc	2,00E-11	-4,67E-10	5,62E-13	-2,39E-12	1,45E-11	-6,51E-10	2,16E-13	1,84E-12	2,56E-10	0,00E+00	2,55E-12	3,03E-11
LU	3,49E-05	6,78E-03	6,19E-07	-3,35E-06	6,89E-06	1,04E-03	2,48E-07	2,11E-06	7,92E-04	0,00E+00	7,37E-06	5,02E-05



VI. PRODUCTS COVERED BY THE PEP

The products covered by the given PEP are represented in the below table with:

Product name	Fibre count
GRHQ-K-CDGNRV 4/T4 50um-OM4 TIA/EIA (1.6 tub)	4
GRHQ-K-CDGNRV 4/T4 62,5um-OM1 S12 (1.6 tub)	4
GRHQ-K-CDGNRV 4/T4 G657A1 S12 (1.6 tub)	4
GRHQ-K-CDGNRV 12/T12 G657A1 S12 (1.6 tub)	12
GRHQ-K-CDGNRV 12/T6 50um-OM4 TIA/EIA (1.6 tub)	12
GRHQ-K-CDGNRV 24/T12 G657A1 S12 (1.6 tub)	24
GRHQ-K-CDGNRV 24/T6 50um-OM4 TIA/EIA (1.6 tub)	24
GRHQ-K-CDGNRV 48/T12 G657A1 S12 (1.6 tub)	48
GRHQ-K-CDGNRV 48/T6 50um-OM4 TIA/EIA (1.6 tub)	48
GRHQ-K-CDGNRV 96/T12 G657A1 S12 (1.6 tub)	96
FZOMSU-SD 1x6xSML G657A1 (F12 1.6 CPR Ds2d2)	6
FZOMSU-SD 1x8xGIL OM3 (F12 1.6 CPR Ds2d2)	8
FZOMSU-SD 1x12xSML G657A1 (F12 1.6 CPR Ds2d2)	12
FZOMSU-SD 2x6xGIL OM3 (F12 1.6 CPR Ds2d2)	12
FZOMSU-SD 1x8xSML G657A1 + 1x8xGIL OM3 (F12 1.6 CPR Ds2d2)	16
FZOMSU-SD 1x12xSML G652D + 1x12xGKL OM1 (F12 2.25 CPR E)	24
FZOMSU-SD 2x12xSML G657A1 (F12 1.6 CPR Ds2d2)	24
FZOMSU-SD 2x6xSML G657A1 + 2x6xGIL OM3 (F12 1.6 CPR Ds2d2)	24
FZOMSU-SD 4x12xSML G652D (F12 2.8 CPR E)	48
FZOMSU-SD 4x12xSML G657A1 (F12 1.6 CPR Ds2d2)	48
FZOMSU-SD 8x12xSML G657A1 (F12 1.6 CPR Ds2d2)	96
G12 G652D/G657A1 QXXI SLIM (CT)	12
G12-9 QXXI (2.5 mm tub)	12
G24 G652D/G657A1 QXXI SLIM (CT)	24
G24-50 OM4 QXXI SLIM	24
G24-9 QXXI (2.5 mm tub)	24
G48 G652D/G657A1 QXXI SLIM (CT)	48
G48-50 OM3 QXXI SLIM	48
G48-50 OM4 QXXI SLIM	48
G48-9 QXXI (2.5 mm tub)	48
G96 G652D/G657A1 QXXI SLIM (CT)	96
G96-9 QXXI (2.5 mm tub)	96