

PIPING MATERIALS - BUSHING INSULATORS

# PEP ecopassport®

## Environmental Product Declaration



Document in compliance with ISO 14025: 2006 "Environmental labels and declarations. Type III environmental declarations"

ORGANIZATION		CONTACT INFORMATION			
ABB Oy, Wiring Accessories		ella.helynranta@fi.abb.com			
ADDRESS		WEBSITE			
Porvoon Sisäkehä 2, Porvoo, Finland		www.abb.com			
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# ABB Purpose & Embedding Sustainability

ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow. With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and humane behavior.

Scan QR code for more information:



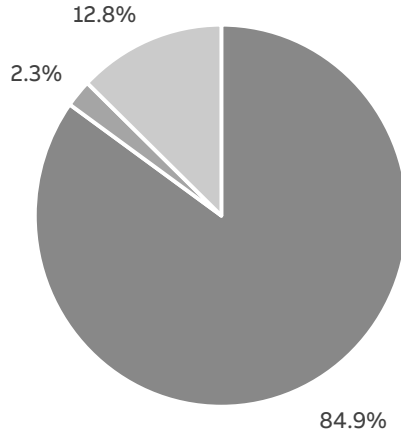
## General Information

Reference product	2TKA160007G1 - AJ10.20
Description of the product	Bushing insulator AJ10.20. It is a $\varnothing$ 20 mm piping material designed for feedthrough situations in electrical conduits in concrete structures cast on-site Made of halogen free material (IEC/61249-2-21).
Functional unit	Protect persons during 20 years against direct contact with live parts and allow grouping monitoring, control, and protection devices in a single enclosure or a cabinet having the following dimensions ( $\varnothing$ 20 mm x 60 mm x 50 mm).
Other products covered	The PEP covers other products from Conduit accessories product range. Other products covered in this PEP are listed in page 9.

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# Constituent Materials



■ Plastics 14.1253632 g   ■ Metals 0.3883776 g   ■ Others 2.1262592 g

**Total weight of Reference product**

16.64 g

Plastics as % of weight		Metals as % of weight		Others as % of weight	
Name and CAS number	Weight%	Name and CAS number	Weight%	Name and CAS number	Weight%
HDPE	83.1	Steel	2.3	Carton	11.2
PE-based color white	1.7	Surface treatment	0.0	Plastic	1.6

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## Additional Environmental Information

<b>Manufacturing</b>	Manufactured at ABB Oy, Wiring Accessories ISO 14001 certified production site.
<b>Distribution</b>	Product distribution optimised by setting up local distribution centres.
<b>Installation</b>	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials is accounted during the installation phase.
<b>Use</b>	With the nature of the product, there isn't any energy or materials consumed during the Use stage. There is also no maintenance needed during normal use.
<b>End of life</b>	No special end-of-life treatment required. This product can enter the usual end-of-life treatment process according to countries' best practices.
<b>Benefits and loads beyond the system boundaries</b>	Net benefits and loads calculated according to PCR ed 4 and formulas given in Annex G of the EN 50693.

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# Environmental Impacts

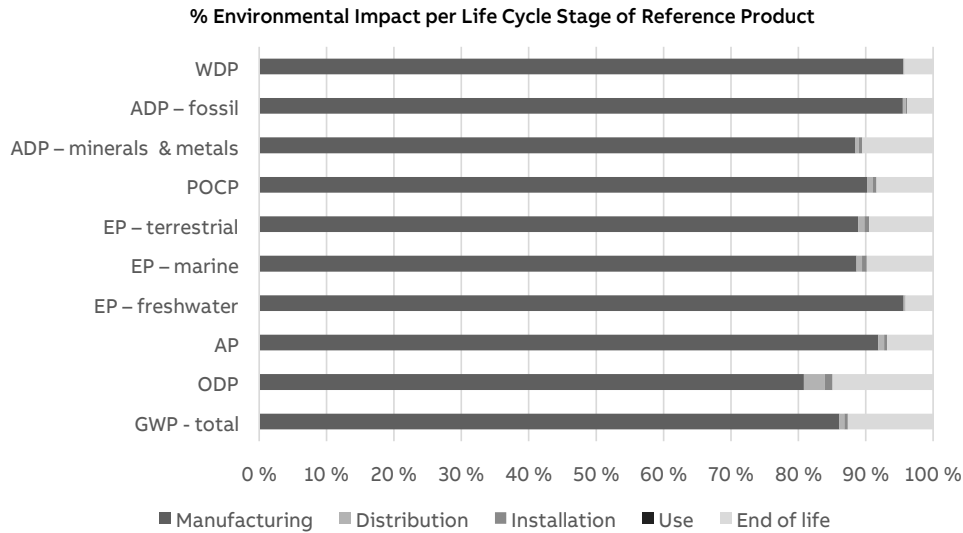
<b>Reference lifetime</b>	20 years
<b>Product category</b>	Unequipped enclosures and cabinets
<b>Installation elements</b>	No additional elements needed
<b>Use scenario</b>	Non applicable for unequipped enclosures and cabinets
<b>Geographical representativeness</b>	The data are representative of the countries in which the product is distributed: Europe, with great emphasis on Finland.
<b>Technological representativeness</b>	The manufacturing processes considered are representative of the products production
<b>Software and database used</b>	Software: SimaPro 9.3.0.3 Database: ecoinvent 3.8

## Energy model used

<b>Manufacturing</b>	Estonia national electric mix
<b>Installation</b>	Based on sales mix (see geographical representativeness)
<b>Use</b>	-
<b>End of life</b>	Based on sales mix (see geographical representativeness)

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## Common base of mandatory indicators



### Environmental impact indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Benefits
<b>GWP-total</b>	<b>kg CO<sub>2</sub> eq.</b>	5.40E-02	4.65E-02	3.95E-04	2.79E-04	0.00E+00	6.83E-03	9.06E-03
<b>GWP-fossil</b>	<b>kg CO<sub>2</sub> eq.</b>	5.38E-02	4.63E-02	3.95E-04	2.77E-04	0.00E+00	6.82E-03	9.04E-03
<b>GWP-biogenic</b>	<b>kg CO<sub>2</sub> eq.</b>	1.47E-04	1.40E-04	1.14E-07	1.98E-06	0.00E+00	4.44E-06	3.82E-05
<b>GWP-luluc</b>	<b>kg CO<sub>2</sub> eq.</b>	5.30E-05	4.87E-05	1.78E-07	1.53E-07	0.00E+00	4.00E-06	-1.49E-05
GWP-fossil = Global Warming Potential fossil fuels GWP-biogenic = Global Warming Potential biogenic GWP-luluc = Global Warming Potential land use and land use change								
<b>ODP</b>	<b>kg CFC-11 eq.</b>	2.93E-09	2.37E-09	9.10E-11	3.39E-11	0.00E+00	4.38E-10	-2.44E-10
ODP = Depletion potential of the stratospheric ozone layer								
<b>AP</b>	<b>H+ eq.</b>	2.33E-04	0.00E+00	2.01E-06	9.92E-07	0.00E+00	1.60E-05	-4.13E-05
AP = Acidification potential, Accumulated Exceedance								
<b>EP-freshwater</b>	<b>kg P eq.</b>	1.77E-05	4.87E-05	2.52E-08	2.39E-08	0.00E+00	7.27E-07	-2.21E-06
<b>EP-marine</b>	<b>kg N eq.</b>	5.10E-05	4.52E-05	4.29E-07	3.55E-07	0.00E+00	5.02E-06	-4.23E-06
<b>EP-terrestrial</b>	<b>mol N eq.</b>	5.05E-04	4.49E-04	4.73E-06	3.52E-06	0.00E+00	4.80E-05	-6.24E-05
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment EP-terrestrial = Eutrophication potential, Accumulated Exceedance								
<b>POCP</b>	<b>kg NMVOC eq.</b>	1.46E-04	1.32E-04	1.19E-06	8.58E-07	0.00E+00	1.23E-05	-2.10E-05
POCP = Formation potential of tropospheric ozone								
<b>ADP-minerals &amp; metals</b>	<b>kg Sb eq.</b>	2.70E-07	2.39E-07	1.35E-09	3.39E-11	0.00E+00	2.84E-08	-9.89E-08
<b>ADP-fossil</b>	<b>MJ</b>	1.48E+00	1.41E+00	5.95E-03	2.90E-03	0.00E+00	5.75E-02	-4.30E-01
ADP-minerals & metals = Abiotic depletion potential for non-fossil resources ADP-fossil = Abiotic depletion for fossil resources potential								
<b>WDP</b>	<b>m<sup>3</sup> eq. depr.</b>	2.87E-02	2.74E-02	1.76E-05	3.08E-05	0.00E+00	1.22E-03	-8.22E-03
WDP = Water Deprivation potential								

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## Common base of mandatory indicators

### Inventory flows indicator – Resource use indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
PERE	MJ	1.33E-01	1.30E-01	8.23E-05	1.12E-04	0.00E+00	3.00E-03	-2.26E-02
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.33E-01	1.30E-01	8.23E-05	1.12E-04	0.00E+00	3.00E-03	-2.26E-02
PENRE	MJ	2.84E-05	2.31E-05	2.70E-07	1.73E-07	0.00E+00	4.89E-06	2.99E-06
PENRM	MJ	1.57E+00	1.50E+00	6.32E-03	3.07E-03	0.00E+00	6.12E-02	-4.58E-01
PENRT	MJ	1.57E+00	1.50E+00	6.32E-03	3.07E-03	0.00E+00	6.12E-02	-4.58E-01

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials  
 PERM = Use of renewable primary energy resources used as raw materials  
 PERT = Total Use of renewable primary energy resources  
 PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials  
 PENRM = Use of non-renewable primary energy resources used as raw materials  
 PENRT = Total Use of non-renewable primary energy re-sources

### Inventory flows indicator – Indicators describing the use of secondary materials, water, and energy re-sources

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m <sup>3</sup>	5.54E-04	5.19E-04	6.97E-07	9.77E-07	0.00E+00	3.29E-05	-1.42E-04

SM = Use of secondary material  
 RSF = Use of renewable secondary fuels  
 NRSF = Use of non-renewable secondary fuels  
 FW = Use of net fresh water

### Inventory flows indicator – Waste category indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
Hazardous waste disposed	kg	4.74E-07	3.56E-07	1.48E-08	6.99E-09	0.00E+00	9.60E-08	-8.21E-08
Non- hazardous waste disposed	kg	1.33E-02	3.19E-03	2.90E-04	1.48E-03	0.00E+00	8.32E-03	-1.97E-04
Radioactive waste disposed	kg	2.11E-06	1.81E-06	4.03E-08	1.70E-08	0.00E+00	2.40E-07	-7.82E-07

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## Common base of mandatory indicators

### Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	7.04E-03	0.00E+00	0.00E+00	1.36E-03	0.00E+00	5.68E-03	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

### Inventory flow indicator – other indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Installation	Use	End of life	Bene- fits
Biogenic carbon content of the product	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg of C	0.00E+00	8.40E-04	0.00E+00	-8.40E-04	0.00E+00	0.00E+00	0.00E+00

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## Extrapolation Factors

For other products than the Reference product covered by this PEP, the environmental impacts for each phase of the lifecycle are obtained by multiplying the values of the Reference product by the following coefficients:

\* if the coefficient is "1", the impacts of the phase of the life cycle are assimilated to the Reference product, meaning that the impacts are unchanged in comparison to the Reference product

Product name	Manu- facturing	Distri- bution	Installation	Use	End of life	Benefits
2TKA001608G1	1.58	11.58	1.54	0.00	1.03	2.49
2TKA001609G1	1.82	14.05	1.71	0.00	1.46	2.93
2TKA160010G1	0.74	1.14	0.47	0.00	0.52	0.59
2TKA160007G1 (REF)	1.00	1.00	1.00	0.00	1.00	1.00
2TKA160008G1	1.26	1.39	1.71	0.00	1.43	1.42

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## Environmental Impact Indicator Glossary

### Impact indicators

Indicator	Description	Distribution
Global warming potential (GWP) - total	Indicator of potential global warming caused by emissions to air contributing to the greenhouse effect. The total global warming potential (GWP-total) is the sum of three sub-categories of climate change. GWP-total = GWP-fossil + GWP-biogenic + GWP- land use and land use change	kg CO <sub>2</sub> eq.
Ozone depletion (ODP)	Emissions to air that contribute to the destruction of the stratospheric ozone layer	kg CFC-11 eq.
Acidification of soil and water (A)	Acidification of soils and water caused by the release of certain gases to the atmosphere, such as nitrogen oxides and sulphur oxides	H+ eq.
Eutrophication (E)	Indicator of the contribution to eutrophication of water by the enrichment of the aquatic ecosystem with nutritional elements, e.g. industrial or domestic effluents, agriculture, etc. This indicator is divided to three: freshwater, marine and terrestrial.	kg P eq., kg N eq., mole N eq.
Photochemical ozone creation (POCP)	Indicator of emissions of gases that affect the creation of photochemical ozone in the lower atmosphere (smog) because of the rays of the sun.	kg NMVOC eq.
Depletion of abiotic resources – elements (ADPe)	Indicator of the depletion of natural non-fossil resources	kg Sb eq.
Depletion of abiotic resources – fossil fuels (ADPf)	The use of non-renewable fossil resources in an unsustainable way (e.g. from material to waste)	MJ (lower heating value)
Water Deprivation potential (WDP)	Deprivation-weighted water consumption. Assesses the potential of water deprivation, to either humans or ecosystems, building on the assumption that the less water remaining available per area, the more likely another user will be deprived.	m <sup>3</sup> eq. depr.

### Resource use indicators

Indicator	Description	Distribution
Total use of primary energy	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) + Total use of renewable primary energy re-sources (primary energy and primary energy resources used as raw materials)	MJ (lower heating value)

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VH26	www.pep-ecopassport.org	
<b>Date of issue:</b>	<b>Validity period:</b>	5 years
Internal <input type="radio"/>	External <input checked="" type="radio"/>	
Independent verification of the declaration and data, in compliance with ISO 14025: 2006		
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)		
PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019 The elements of the present PEP cannot be compared with elements from another program		
Document in compliance with ISO 14025: 2006 "Environmental labels and declarations. Type III environmental declarations"		



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