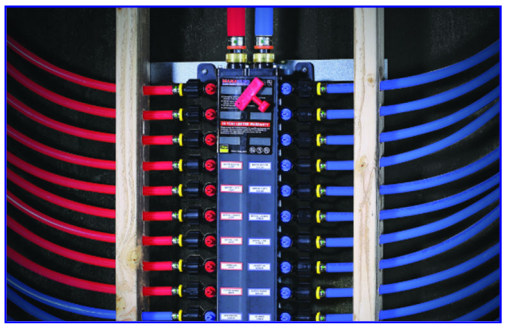
Environmental Product Declaration (EPD)

Declaration code EPD-VPF-GB-67.0



Viega GmbH & Co. KG

connecting technology

PureFlow Press connector and pipes

Basis:

DIN EN ISO 14025
EN 15804 + A2

Company EPD **E**nvironmental **P**roduct **D**eclaration

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Declaration holder	Viega GmbH & Co. KG Viega Platz 1 57439 Attendorn, Germany www.viega.de
Declaration code	EPD-VPF-GB-67.0
Designation of declared product	PureFlow Press connector and pipes
Scope	Transportation of media inside/outside buildings.
Basis	This EPD was prepared on the basis of EN ISO 14025:2011 and DIN EN 15804:2012+A2:2019. In addition, the "Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen" (General guideline for preparation of Type III Environmental Product Declarations) applies. The declaration is based on the PCR documents “PCR Part A” PCR-A-0.3:2018 and “Piping systems including connecting and fitting technology” PCR-RS-1.0:2022.
Validity	Publication date: 14.12.2023 / Last revision: 14.12.2023 / Valid until: 14.12.2028 This verified Company Environmental Product Declaration (company EPD) applies solely to the specified products and is valid for a period of five years from the date of publication in accordance with DIN EN 15804.
LCA Basis	The LCA was prepared in accordance with DIN EN ISO 14040 and DIN EN ISO 14044. The base data includes the data collected at one production plant of Viega GmbH & Co. KG, and the generic data derived from the Ecoinvent 3 data base (v3.8 with aggregated inputs) and Ecoinvent EN 15804. LCA calculations were carried out for the included “cradle to grave” including all upstream chains (e.g. raw material extraction, etc.).
Notes	The ift-Guidance Sheet “Conditions and Guidance for the Use of ift Test Documents” applies. The declaration holder assumes full liability for the underlying data, certificates and verifications.

Christian Kehrer Head of Certification and Surveillance Body	Dr. Torsten Mielecke Chairman of Expert Committee ift-EPD and PCR	Prof. Dr. Eric Brehm External verifier

1 General Product Information

Product definition

The EPD relates to the product group connecting technology and applies to:

1 kg PureFlow press connector and 1 linear metre pipe of company Viega GmbH & Co. KG

These are divided into the following product groups

Product group (PG)		Unit weight
PG1	ManaBloc	0100 kg - 5.357 kg
PG2	PureFlow Press	0.181 g - 1.191 kg
PG3	PureFlow Crimp	0.134 g - 825.537 g
PG4	Pex pipes	83.338 g - 937.540 g

*The relevant piece weights [kg/piece] are specified in the conversion table of Annex B in accordance with PCR Part B. Specification of weights per unit length is not possible.

Table 1 Product groups*

The declared unit is obtained by summing up:

PG	Assessed product	Unit weight	Declared unit
1	Gasket (item no. 437217)	0.68 g	1 kg
2	Adapter (item no. 915906)	2,158.54 g	1 kg
3	Adapter (item no. 466460)	119.88 g	1 kg
4	Viegapex Ultra pipe (item no. 333304)	383.05 g[1]	1 linear metre

[1]A conversion of the environmental impact results of Viegapex Ultra pipe for deviating unit weights is possible by dividing the results by the balanced unit weight of 383.05 g and multiplying by the respective unit weight from Annex B (pipes).

Table 2 Functional unit per reference product

The average unit is declared as follows:
Directly used material flows are determined by means of manufactured masses (kg) and allocated to the declared unit. All other inputs and outputs in the production were scaled to the declared unit in their entirety since there is no typical functional unit due to the high number of variants. The reference period is the year 2022.

The validity of the EPD is restricted to the systems listed in Table 1.

Product description

ManaBloc:
The Viega ManaBloc is designed as a complete water distribution system and enables all supply lines to be controlled from a central point. In addition, several fittings can be used simultaneously without dramatic pressure or temperature drops occurring. A system with a ManaBloc ultimately reduces the number of press connectors (and therefore potential leakage points) behind the wall. ManaBloc has the largest internal reservoir on the market and allows for lower temperature and pressure fluctuations than distribution and junction systems. In addition, ManaBlocs are designed to be lime-resistant and corrosion-resistant and

come with a 10-year transferable guarantee. A faster hot water supply is possible with special pipes for connections in sizes ⅜" and ½".

PureFlow Press:
Known for pioneering system solutions, Viega offers complete sanitary systems for drinking water. By combining the highest rated PEX pipes on the market (according to industry standards) with the revolutionary Viega ManaBloc and press distributions and press connectors, the Viega PureFlow system saves time, labor and money. As the first press system for the PEX market, Viega PureFlow press connectors have factory-fitted couplings that improve uniformity and reduce installation errors. Available in high-performance polymer and lead-free Viega red brass, Viega PureFlow press connectors are ideal for domestic and commercial applications. Viega also offers press connectors for simple copper-to-PEX transitions as well as tools and press jaws tailored to the system requirements for simple and uniform installation.

PureFlow Crimp:
Thanks to the reliability and quality required for drinking water, Viega PureFlow Crimp press connector are part of Viega's comprehensive plumbing solution. Combined with the unique Viega ManaBloc water distribution system and the highest rated PEX pipes on the market (according to industry standards), Viega PureFlow crimp fittings are a proven method of connecting PEX elements.

Pex pipes:
Pexfit Pro multi-layer composite pipes are available as a ring coil with and without a protective pipe and with different insulation thicknesses. Dimensionally stable multi-layer composite pipes are also available in 5 metre lengths

For a detailed product description refer to the manufacturer specifications or the product specifications of the respective offer/quotation.

Product manufacture

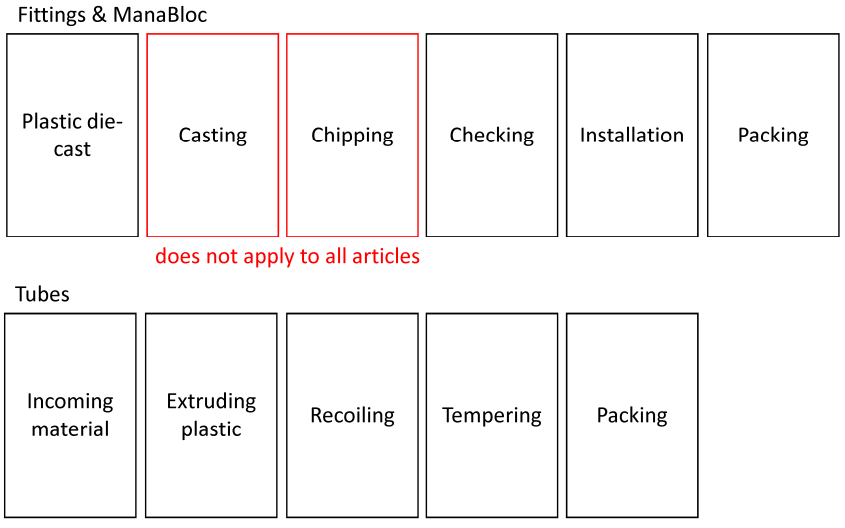


Illustration 1 Manufacturing process

Note: Depending on the product type, not all production steps are carried out.

Application	Drinking water systems, suitable for radiant heating systems
Test evidence / reports	For information on updated verifications (incl. other national approvals) refer to www.viega.us.
Management systems	The following management systems are held: • Quality management system as per DIN EN ISO 9001:2015 • Energy management system as per DIN EN ISO 50001:2018 • Environmental management system as per DIN EN ISO 14001:2015 • Occupational health and safety management system as per DIN EN ISO 45001:2018
Additional information	For additional verifications of applicability or conformity refer to the CE marking and the documents accompanying the product, if applicable.

2 Materials used

Primary materials	The raw materials used can be found in chapter 6.2 Inventory analysis (Inputs). The raw materials used can be found in chapter 6 Life Cycle Assessment.
Declarable substances	The product contains no substances from the REACH candidate list (declaration dated 04.10.2023). All relevant safety data sheets are available from Viega GmbH & Co. KG.

3 Construction process stage

Processing recommendations, installation	Observe the instructions for assembly/installation, operation, maintenance and disassembly, provided by the manufacturer. For this, see www.viega.us.

4 Use stage

Emissions to the environment	No emissions to indoor air, water and soil are known. There may be VOC emissions. There is no contact with the indoor/outdoor air.
Reference service life (RSL)	The RSL information was provided by the manufacturer. The RSL must be established under specified reference conditions of use and relate to the declared technical and functional performance of the product within the building. It must be determined according to all specific rules given in European product standards or, if none are available, according to a c-PCR. It must also take into account ISO 15686-1, -2, -7 and -8. If there is guidance on deriving RSLs from European Product Standards or a c-PCR, then such guidance must take precedence. If it is not possible to determine the service life as the RSL in accordance with ISO 15686, the BBSR table “Nutzungsdauer von Bauteilen zur Lebenszyklusanalyse nach BNB” (service life of building components for life cycle assessment in accordance with the sustainable construction

evaluation system) can be used. For further information and explanations refer to www.nachhaltigesbauen.de.

For this EPD the following applies:
For a "cradle to grave" EPD and Module D (A + B + C + D), a reference service life (RSL) must be specified.
According to the manufacturer, a 50-year service life has been specified for the PureFlow Press connector and pipes made by Viega GmbH & Co. KG.

The service life is dependent on the characteristics of the product and in-use conditions. The conditions and characteristics described in the EPD are applicable, in particular the characteristics listed below:

- Outdoor environment: Climatic influences may have a negative impact on the service life.
- Indoor environment: No impacts known that have a negative effect on the service life

The service life solely applies to the characteristics specified in this EPD or the corresponding references.
The RSL does not reflect the actual life time, which is usually determined by the service life and the redevelopment of a building. It does not give any information on the useful life, warranty referring to performance characteristics or guarantees.

5 End-of-life stage

Possible end-of-life stages

PureFlow Press connector and pipes are sent to central collection points. There the products are usually shredded and sorted into their constituents. The end-of-life stage depends on the site where the products are used and is therefore subject to the local regulations. Observe the locally applicable regulatory requirements.

In this EPD, the modules of after-use are presented according to the market situation.
Metal and plastics are recycled to certain parts. Residual fractions are sent to landfill or, in part, thermally recycled.

Disposal routes

The LCA includes the average disposal routes.

All life cycle scenarios are detailed in the Annex.

6 Life Cycle Assessment (LCA)

Environmental product declarations are based on life cycle assessments (LCAs) which use material and energy flows for the calculation and subsequent representation of environmental impacts.

As a basis for this, life cycle assessments were prepared for PureFlow press connectors and pipes. These LCAs are in conformity with the requirements set out in DIN EN 15804 and the international standards DIN EN ISO 14040, DIN EN ISO 14044, ISO 21930 and EN ISO 14025.

The LCA is representative of the products presented in the Declaration and the specified reference period.

6.1 Definition of goal and scope

Aim

The goal of the LCA is to demonstrate the environmental impacts of the products. In accordance with DIN EN 15804, the environmental impacts covered by this Environmental Product Declaration are presented for the entire product life cycle in the form of basic information. In addition, environmental impacts of selected environmental impact indicators are indicated according to the TRACI method.

Data quality, data availability and geographical and time-related system boundaries

The specific data originate exclusively from the 2022 fiscal year. These were recorded at the plant in McPherson by means of an on-site survey and originate partly from business records and partly from direct readings.

The generic data originate from the Ecoinvent 3 data base (v3.9.1 with aggregated inputs from 2022) and Ecoinvent EN 15804. The last update of both databases was in 2023. Data from before this date originate also from these databases and are not more than ten years old. No other generic data were used for the calculation.

Generic data are selected as accurately as possible in terms of geographic reference. If no country-specific data sets are available or if the regional reference cannot be determined, European or globally valid data sets are used.

Data gaps were either filled with comparable data or conservative assumptions, or the data were cut off in compliance with the 1% rule.

The life cycle was modelled using the sustainability software tool “Umberto 11” for the development of life cycle assessments.

The data quality complies with the requirements of prEN 15941:2022.

Scope / system boundaries

The system boundaries refer to the supply of raw materials and purchased parts, manufacture/production, use and end-of-life stage of the PureFlow Press connector and pipes.
No additional data from pre-suppliers/subcontractors or other sites were taken into consideration.

Cut-off criteria

All company data collected, i.e. all commodities/input and raw materials used, the thermal energy and electricity consumption, were taken into consideration.

The boundaries cover only the product-relevant data. Building sections/parts of facilities that are not relevant to the manufacture of the products, were excluded.

The transport distances of the pre-products used were taken into consideration as a function of 100% of the mass of the products. The following means of transportation was adopted.

- >32 t truck/semitrailer, Euro 6, diesel, 53 % capacity utilization

Other transport distances of the pre-products were not taken into consideration.

The criteria for the exclusion of inputs and outputs as set out in DIN EN 15804 are fulfilled. From the data analysis it can be assumed that the total of negligible processes per life cycle stage does not exceed 1% of the mass/primary energy. This way the total of negligible processes does not exceed 5% of the energy and mass input. The life cycle calculation also includes material and energy flows that account for less than 1%.

6.2 Inventory analysis

Aim

All material and energy flows are described below. The processes covered are presented as input and output parameters and refer to the declared units.

Life cycle stages

The complete life cycle of PureFlow Press connector and pipes is shown in the annex. The product stage "A1 – A3", construction process stage "A4 – A5", use stage "B1 – B7", end-of-life stage "C1 – C4" and the benefits and loads beyond the system boundaries "D" are considered.

Benefits

The below benefits have been defined as per DIN EN 15804:

- Benefits from recycling
- Benefits (thermal and electrical) from incineration

Allocation of co-products

Allocations occur during production.
Allocation was based on the masses (units) of products produced.

Allocations for re-use, recycling and recovery

If the products are reused/recycled and recovered during the product stage (rejects), the elements are shredded, if necessary and then sorted into their constituents. This is done by various process plants, e.g. magnetic separators.
The system boundaries were set following their disposal, reaching the end-of-waste status.

Allocations beyond life cycle boundaries

The use of recycled materials in the manufacturing process was based on the current market-specific situation. In parallel to this, a recycling potential was taken into consideration that reflects the economic value of the product after recycling (recyclate).
The system boundary set for the recycled material refers to collection.

Secondary material

The use of secondary material in module A3 by Viega GmbH & Co. KG was considered. Secondary material is not used.

Inputs

The following manufacturing-related inputs were included in the LCA per 1 kg PureFlow press connector and 1 linear metre of pipe:

Energy
For the input material natural gas, "natural gas, high pressure (US), domestic supply with seasonal storage" was assumed. For the electricity mix, the electricity mix "US-MRO" were assumed.

A portion of the process heat is used for space heating. This can, however, not be quantified, hence a “worst case” figure was taken into account for the product.

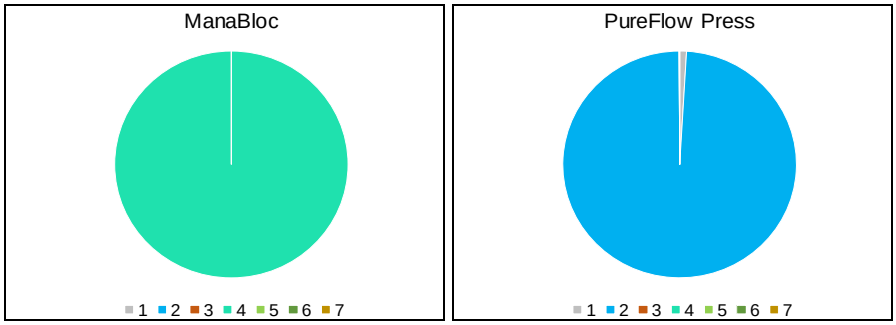
Water
There is no water consumption in the individual process steps for production for German products. The following water consumption per kg of element results for American products.

Assessed product	Water volume
ManaBloc	100.37 l
PureFlow Press	7.23 l
PureFlow Crimp	25.95 l
Pex pipes	1.07 l

Table 3 Water consumption per declared unit

The consumption of fresh water specified in Section 6.3 originates (among others) from the process chain of the pre-products and the process water for cooling.

Raw material/Pre-products
The charts below show the share of raw materials/pre-products in percent.



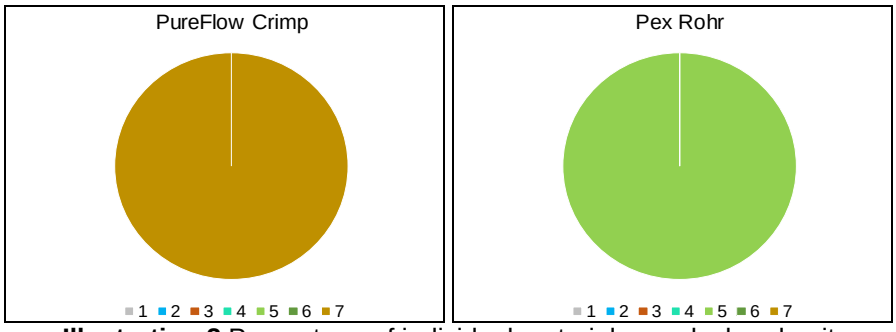


Illustration 2 Percentage of individual materials per declared unit

No.	Material	Mass in %			
		ManaBloc	PureFlow Press	PureFlow Crimp	Pex pipe
1	Stainless steel	0.00	0.95	0.00	0.00
2	SiBr	0.00	98.99	0.00	0.00
3	PA/PSU	100.00	0.00	0.00	0.00
4	PE	0.00	0.00	0.00	100.00
5	PS	0.00	0.06	0.00	0.00
6	Brass	0.00	0.00	100.00	0.00

Table 4 Percentage of individual materials per declared unit

Ancillary materials and consumables
There are 359 g (ManaBloc), 26 g (PureFlow Press), 93 g (PureFlow Crimp), 4 g (Pex tube) of ancillary materials and consumables.

Product packaging
The amounts used for product packaging are as follows:

No.	Packaging	Mass in g			
		ManaBloc	PureFlow Press	PureFlow Crimp	Pex pipe
1	PE film, PE foam	57.35	1.24	0.78	0.00
2	Paper, cardboard, carton	133.82	5.06	6.09	0.00

Table 5 Weight in kg of packaging per declared unit

Biogenic carbon content
Only the biogenic carbon content of the associated packaging is reported, as the total mass of biogenic carbon-containing materials is less than 5% of the total mass of the product and associated packaging. According to EN 16449, the following amounts of biogenic carbon are generated for packaging:

Assessed product	Content in kg C per declared unit in the corresponding packaging
ManaBloc	0.06
PureFlow Press	0.00
PureFlow Crimp	0.00
Pex pipe	0.00

Table 6: Biogenic carbon content of the packaging at the factory gate

Outputs

The following manufacturing-related outputs were included in the LCA per 1 kg PureFlow press connector and 1 linear metre of pipe:

Waste
Secondary raw materials were included in the benefits.
See Section 6.3 Impact assessment.

Waste water
During production, 0.08 l (ManaBloc), 0.01 l (PureFlow Press), 0.02 l (PureFlow Crimp) or <0.01 l (Pex Rohr) of wastewater is generated.

6.3 Impact assessment

Aim

The impact assessment covers both inputs and outputs. The impact categories applied are stated below:

Core indicators

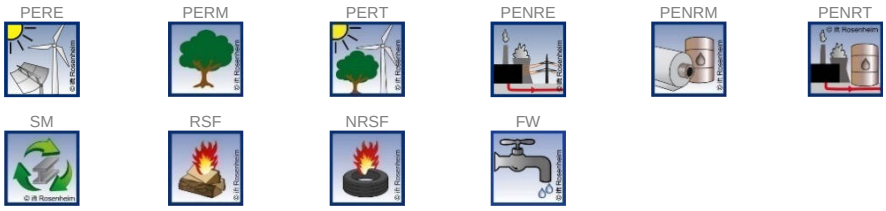
The models for impact assessment were applied as described in DIN EN 15804-A2.
The core indicators presented in the EPD are as follows:

- Climate change - total (GWP-t)
- Climate change - fossil (GWP-f)
- Climate change - biogenic (GWP-b)
- Climate change - land use & land use change (GWP-l)
- Ozone depletion (ODP)
- Acidification (AP)
- Eutrophication freshwater (EP-fw)
- Eutrophication salt water (EP-m)
- Eutrophication land (EP-t)
- Photochemical ozone creation (POCP)
- Depletion of abiotic resources - fossil fuels (ADPF)
- Depletion of abiotic resources - minerals and metals (ADPE)
- Water use (WDP)

Resource management

The models for impact assessment were applied as described in DIN EN 15804-A2.
The following resource use indicators are presented in the EPD:

- Renewable primary energy as energy source (PERE)
- Renewable primary energy for material use (PERM)
- Total use of renewable primary energy (PERT)
- Non-renewable primary energy as energy source (PENRE)
- Renewable primary energy for material use (PENRM)
- Total use of non-renewable primary energy (PENRT)
- Use of secondary materials (SM)
- Use of renewable secondary fuels (RSF)
- Use of non-renewable secondary fuels (NRSF)
- Net use of freshwater resources (FW)

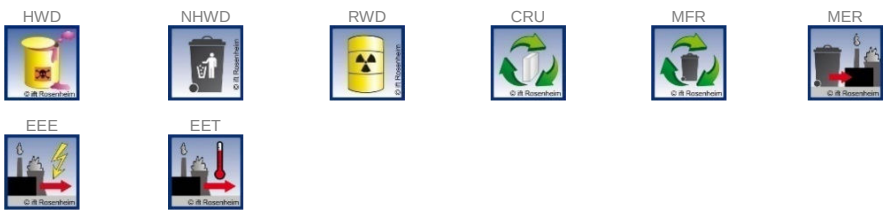


Waste

The waste generated during the production of 1 kg PureFlow press connector and 1 linear metre pipe is evaluated and shown separately for the fractions trade wastes, special wastes and radioactive wastes. Since waste handling is modelled within the system boundaries, the amounts shown refer to the deposited wastes. A portion of the waste indicated is generated during the manufacture of the pre-products.

The models for impact assessment were applied as described in DIN EN 15804-A2.
The following waste categories and indicators for output closures are presented in the EPD:

- Disposed hazardous waste (HWD)
- Non-hazardous waste disposed (NHWD)
- Radioactive waste disposed (RWD)
- Components for re-use (CRU)
- Materials for recycling (MFR)
- Materials for energy recovery (MER)
- Exported electrical energy (EEE)
- Exported thermal energy (EET)



Additional environmental impact indicators

The models for impact assessment were applied as described in DIN EN 15804-A2.
The additional impact categories presented in the EPD are as follows:

- Particulate matter emissions (PM)
- Ionizing radiation, human health (IRP)
- Ecotoxicity – freshwater (ETP-fw)
- Human toxicity, carcinogenic effects (HTP-c)
- Human toxicity, non-carcinogenic effects (HTP-nc)
- Impacts associated with land use/soil quality (SQP)

Impact assessment according to TRACI

TRACI - a Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts - is a midpoint-oriented life cycle impact assessment method, developed specifically for the US and provided by the United States EPA. A distinction is made between two categories in this application: Effects on human health and effects on the environment. This implementation distinguishes two categories: human health and environmental impacts implementation of TRACI and excludes the impact categories 'fossil fuel depletion', 'land use' and 'water use'. **The results listed below refer to 1 lbs**.

	Results per 1 kg ManaBloc														
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	2.13E+01	7.25E-02	3.61E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	6.58E-02	1.18E-04	-3.97E+00
GWP-f	kg CO_2 equivalent	2.12E+01	7.24E-02	3.60E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	6.58E-02	1.17E-04	-3.95E+00
GWP-b	kg CO_2 equivalent	7.02E-02	2.53E-05	3.25E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47E-06	-1.37E-05	7.13E-07	-1.38E-02
GWP-l	kg CO_2 equivalent	7.55E-03	3.72E-05	7.69E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.21E-06	3.99E-05	8.52E-08	-2.24E-03
ODP	kg CFC-11-eq.	6.23E-08	1.23E-09	6.56E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72E-10	3.19E-10	2.77E-12	-2.14E-08
AP	mol H^+-eq.	6.29E-02	2.83E-04	2.53E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47E-05	1.08E-04	1.13E-06	-9.82E-03
EP-fw	kg P-eq.	1.59E-02	6.06E-06	3.53E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.52E-07	7.39E-06	3.07E-08	-6.01E-04
EP-m	kg N-eq.	2.36E-02	5.17E-05	2.05E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68E-05	6.68E-05	3.12E-07	-4.83E-03
EP-t	mol N-eq.	1.45E-01	5.35E-04	4.97E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80E-04	3.30E-04	3.34E-06	-3.00E-02
POCP	kg NMVOC-eq.	8.54E-02	1.97E-04	1.08E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.59E-05	1.05E-04	8.33E-07	-1.51E-02
ADPF*[2]	MJ	1.60E-05	0.00E+00	8.20E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91E-08	2.34E-07	2.45E-10	-1.50E-06
ADPE*[2]	kg Sb equivalent	3.94E+02	1.10E+00	3.07E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	2.02E-01	2.56E-03	-5.90E+01
WDP*[2]	m^3 world-eq. deprived	6.99E+06	5.48E-03	2.31E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74E-04	8.14E-03	1.41E-05	-2.88E+00
Resource management																
PERE	MJ	3.58E+01	1.38E-02	2.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	2.41E-02	4.35E-05	-2.03E+00
PERM	MJ	2.08E+00	0.00E+00	-2.08E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.79E+01	1.38E-02	1.21E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	2.41E-02	4.35E-05	-2.03E+00
PENRE	MJ	3.72E+02	1.10E+00	1.26E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	2.05E+01	2.08E-01	-5.90E+01
PENRM	MJ	2.17E+01	0.00E+00	-1.23E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	-2.03E+01	-2.05E-01	0.00E+00
PENRT	MJ	3.94E+02	1.10E+00	3.07E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	2.02E-01	2.56E-03	-5.90E+01
SM	kg	3.07E-02	4.60E-04	1.74E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.48E-05	1.32E-03	9.77E-07	-2.68E-03
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	4.01E-01	1.50E-04	4.26E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13E-05	1.55E-04	2.57E-06	-6.80E-02
Categories of waste																
HWD	kg	4.67E-01	8.05E-04	1.69E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13E-04	1.53E-03	2.20E-06	-5.73E-02
NHWD	kg	7.38E+01	2.58E-02	1.59E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62E-03	2.82E-02	6.54E-05	-2.31E+00
RWD	kg	3.65E-04	0.00E+00	1.70E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34E-08	4.72E-07	8.06E-10	-3.72E-05
Output material flows																
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	2.26E-03	0.00E+00	9.82E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20E-06	3.58E-01	1.78E-08	-4.33E-04
MER	kg	1.05E-05	0.00E+00	1.81E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.52E-09	1.42E-07	8.02E-11	-7.50E-07
EE	MJ	2.29E-02	0.00E+00	7.59E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76E-05	3.16E-04	4.40E-07	-1.26E-03

Key:
GWP-t – global warming potential - total **GWP-f** – global warming potential fossil fuels **GWP-b** – global warming potential - biogenic **GWP-l** – global warming potential - land use and land use change **ODP** – ozone depletion potential **AP** - acidification potential **EP-fw** - eutrophication potential - aquatic freshwater **EP-m** - eutrophication potential - aquatic marine **EP-t** - feutrophication potential - terrestrial **POCP** - photochemical ozone formation potential **ADPF*[2]** - abiotic depletion potential – fossil resources **ADPE*[2]** - abiotic depletion potential - minerals&metals **WDP*[2]** - Water (user) deprivation potential **PERE** - Use of renewable primary energy **PERM** - use of renewable primary energy resources **PERT** - total use of renewable primary energy resources **PENRE** - use of non-renewable primary energy **PENRM** - use of non-renewable primary energy resources **PENRT** - total use of non-renewable primary energy resources **SM** - use of secondary material **RSF** - use of renewable secondary fuels **NRSF** - use of non-renewable secondary fuels **FW** - net use of fresh water **HWD** - hazardous waste disposed **NHWD** - non-hazardous waste disposed **RWD** - radioactive waste disposed **CRU** - components for re-use **MFR** - materials for recycling **MER** - materials for energy recovery **EE** - exported energy

Results per 1 kg ManaBloc																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Additional environmental impact indicators																
PM	Disease incidence	6.44E-07	7.03E-09	6.60E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08E-09	2.97E-09	1.80E-11	-1.42E-07
IRP*[1]	kBq U235-eq.	1.62E+00	9.96E-04	7.66E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41E-04	1.85E-03	3.35E-06	-1.52E-01
ETP-fw*[2]	CTUe	5.08E+01	5.80E-01	9.10E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.13E-02	2.15E-01	1.11E-03	-5.08E+00
HTP-c*[2]	CTUh	4.09E-09	0.00E+00	4.07E-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57E-12	8.73E-11	6.57E-14	-5.25E-10
HTP-nc*[2]	CTUh	1.19E-07	3.22E-11	1.58E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12E-10	5.79E-10	7.44E-13	-1.12E-08
SQP*[2]	dimensionless	2.72E+01	1.08E+00	5.26E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55E-01	3.74E-01	5.80E-03	-2.18E+00

Key:
PM – particulate matter emissions potential **IRP*[1]** – ionizing radiation potential – human health **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **SQP*[2]** – soil quality potential

Results per 1 lbs ManaBloc according to TRACI																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	7.96E+00	2.57E-02	9.85E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72E-03	0.00E+00	1.15E-04	-4.21E+00
ODP	kg CFC-11-eq.	2.53E-08	4.79E-10	2.47E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.64E-11	0.00E+00	2.95E-12	-2.35E-08
POCP	kg O_3-eq.	3.61E-01	1.28E-03	1.07E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.99E-04	0.00E+00	2.04E-05	-2.05E-01
EP-t	kg N-eq.	4.39E-02	2.21E-05	1.39E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52E-06	0.00E+00	2.96E-07	-5.30E-03
AP	kg CO_2 equivalent	2.58E-02	6.08E-05	7.89E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48E-05	0.00E+00	7.47E-07	-1.29E-02
Additional environmental impact indicators																
PM	kg PM2.5-eq.	1.79E-02	1.58E-05	1.02E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38E-06	0.00E+00	1.15E-07	-2.06E-03
ETP-fw*[2]	CTUe	5.50E+01	2.42E-01	1.10E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.41E-02	0.00E+00	4.05E-02	-9.39E+00
HTP-c*[2]	CTUh	5.87E-07	0.00E+00	5.17E-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63E-10	0.00E+00	4.12E-11	-1.32E-07
HTP-nc	CTUh	1.51E-06	1.87E-09	2.40E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.04E-10	0.00E+00	1.85E-09	-2.27E-07

Key:
GWP-t – global warming potential - total **ODP** – ozone depletion potential **POCP** - photochemical ozone formation potential **EP-t** - eutrophication potential - total **AP** - acidification potential **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **PM** – particulate matter emissions potential

Disclaimers:

*1 This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionising radiation from the soil, from radon and from some building materials is also not measured by this indicator.

*2 The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

	Results per 1 kg PureFlow Press														
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	8.32E+00	6.31E-02	1.48E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	2.88E-02	4.66E-04	-7.05E+00
GWP-f	kg CO_2 equivalent	8.27E+00	6.30E-02	1.99E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	2.87E-02	4.63E-04	-7.03E+00
GWP-b	kg CO_2 equivalent	3.77E-02	2.20E-05	1.28E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47E-06	8.15E-06	2.81E-06	-1.30E-02
GWP-l	kg CO_2 equivalent	1.40E-02	3.23E-05	1.18E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.21E-06	4.33E-05	3.37E-07	-1.34E-02
ODP	kg CFC-11-eq.	8.56E-08	1.07E-09	2.49E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72E-10	3.86E-10	1.09E-11	-7.81E-08
AP	mol H^+-eq.	5.19E-01	2.46E-04	1.46E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47E-05	2.32E-04	4.46E-06	-1.05E-01
EP-fw	kg P-eq.	4.23E-02	5.28E-06	2.75E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.52E-07	1.46E-05	1.21E-07	-4.22E-02
EP-m	kg N-eq.	2.75E-02	4.50E-05	7.79E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68E-05	7.02E-05	1.23E-06	-2.70E-02
EP-t	mol N-eq.	3.76E-01	4.65E-04	3.15E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80E-04	7.75E-04	1.32E-05	-3.76E-01
POCP	kg NMVOC-eq.	1.07E-01	1.72E-04	9.38E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.59E-05	2.96E-04	3.29E-06	-5.27E-01
ADPF*[2]	MJ	1.10E+02	0.00E+00	5.45E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91E-08	1.52E-06	9.69E-10	-8.02E-03
ADPE*[2]	kg Sb equivalent	7.80E-03	9.55E-01	1.93E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.56E-01	1.01E-02	-8.70E+01
WDP*[2]	m^3 world-eq. deprived	5.19E+05	4.77E-03	1.27E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74E-04	5.49E-03	5.58E-05	-5.82E+00
Resource management																
PERE	MJ	2.65E+01	1.20E-02	8.26E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	4.81E-02	1.72E-04	-2.33E+01
PERM	MJ	0.00E+00	0.00E+00	-8.16E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.65E+01	1.20E-02	9.67E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	4.81E-02	1.72E-04	-2.33E+01
PENRE	MJ	1.10E+02	9.55E-01	4.39E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.80E-01	1.11E-02	-8.70E+01
PENRM	MJ	0.00E+00	0.00E+00	-2.46E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	-2.36E-02	-9.72E-04	0.00E+00
PENRT	MJ	1.10E+02	9.55E-01	1.93E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.56E-01	1.01E-02	-8.70E+01
SM	kg	3.27E-01	4.00E-04	8.58E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.48E-05	3.61E-04	3.86E-06	-3.33E-01
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.86E-01	1.31E-04	-3.33E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13E-05	1.44E-04	1.01E-05	-1.75E-01
Categories of waste																
HWD	kg	8.40E-01	7.01E-04	3.13E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13E-04	1.02E-03	8.68E-06	-8.07E-01
NHWD	kg	1.54E+02	2.24E-02	1.26E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62E-03	5.70E-02	2.58E-04	-1.52E+02
RWD	kg	2.21E-04	0.00E+00	1.34E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34E-08	3.70E-07	3.18E-09	-1.89E-04
Output material flows																
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.48E-02	0.00E+00	9.13E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20E-06	9.58E-01	7.05E-08	-1.50E-02
MER	kg	4.21E-05	0.00E+00	7.09E-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.52E-09	5.18E-08	3.17E-10	-4.24E-05
EE	MJ	1.08E-01	0.00E+00	7.58E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76E-05	2.04E-04	1.74E-06	-1.05E-01

Key:
GWP-t – global warming potential - total **GWP-f** – global warming potential fossil fuels **GWP-b** – global warming potential - biogenic **GWP-l** – global warming potential - land use and land use change **ODP** – ozone depletion potential **AP** - acidification potential **EP-fw** - eutrophication potential - aquatic freshwater **EP-m** - eutrophication potential - aquatic marine **EP-t** - feutrophication potential - terrestrial **POCP** - photochemical ozone formation potential **ADPF*[2]** - abiotic depletion potential – fossil resources **ADPE*[2]** - abiotic depletion potential - minerals&metals **WDP*[2]** - Water (user) deprivation potential **PERE** - Use of renewable primary energy **PERM** - use of renewable primary energy resources **PERT** - total use of renewable primary energy resources **PENRE** - use of non-renewable primary energy **PENRM** - use of non-renewable primary energy resources **PENRT** - total use of non-renewable primary energy resources **SM** - use of secondary material **RSF** - use of renewable secondary fuels **NRSF** - use of non-renewable secondary fuels **FW** - net use of fresh water **HWD** - hazardous waste disposed **NHWD** - non-hazardous waste disposed **RWD** - radioactive waste disposed **CRU** - components for re-use **MFR** - materials for recycling **MER** - materials for energy recovery **EE** - exported energy

Results per 1 kg PureFlow Press																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Additional environmental impact indicators																
PM	Disease incidence	1.27E-06	6.12E-09	2.16E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08E-09	4.42E-09	7.09E-11	-1.26E-06
IRP*[1]	kBq U235-eq.	8.69E-01	8.67E-04	6.26E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41E-04	1.49E-03	1.32E-05	-7.28E-01
ETP-fw*[2]	CTUe	5.97E+02	5.04E-01	3.68E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.13E-02	2.85E-01	4.39E-03	-6.10E+02
HTP-c*[2]	CTUh	7.86E-08	0.00E+00	1.35E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57E-12	4.19E-11	2.59E-13	-7.98E-08
HTP-nc*[2]	CTUh	6.75E-06	2.80E-11	6.11E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12E-10	1.74E-09	2.94E-12	-6.93E-06
SQP*[2]	dimensionless	1.71E+02	9.39E-01	1.44E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55E-01	6.21E-01	2.29E-02	-1.70E+02

Key:
PM – particulate matter emissions potential **IRP*[1]** – ionizing radiation potential – human health **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **SQP*[2]** – soil quality potential

Results per 1 lbs PureFlow Press according to TRACI																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	2.10E+00	1.59E-02	2.88E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.65E-03	0.00E+00	4.55E-04	-6.97E+00
ODP	kg CFC-11-eq.	2.40E-08	2.97E-10	6.88E-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73E-11	0.00E+00	1.17E-11	-8.44E-08
POCP	kg O_3-eq.	4.20E-01	7.91E-04	4.99E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84E-04	0.00E+00	8.04E-05	-1.62E+00
EP-t	kg N-eq.	8.06E-02	1.37E-05	3.13E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.51E-06	0.00E+00	1.17E-06	-3.13E-01
AP	kg CO_2 equivalent	1.03E-01	3.77E-05	3.05E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-05	0.00E+00	2.95E-06	-4.09E-01
Additional environmental impact indicators																
PM	kg PM2.5-eq.	1.29E-02	9.82E-06	2.55E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69E-06	0.00E+00	4.55E-07	-4.78E-02
ETP-fw*[2]	CTUe	2.70E+03	1.50E-01	2.88E+02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.43E-02	0.00E+00	1.60E-01	-1.08E+04
HTP-c*[2]	CTUh	1.16E-06	0.00E+00	4.89E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87E-10	0.00E+00	1.63E-10	-4.51E-06
HTP-nc	CTUh	2.96E-05	1.16E-09	5.01E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44E-10	0.00E+00	7.32E-09	-1.18E-04

Key:
GWP-t – global warming potential - total **ODP** – ozone depletion potential **POCP** - photochemical ozone formation potential **EP-t** - eutrophication potential - total **AP** - acidification potential **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **PM** – particulate matter emissions potential

Disclaimers:
*1 This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionising radiation from the soil, from radon and from some building materials is also not measured by this indicator.

*2 The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

	Results per 1 kg PureFlow Crimp															
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	8.53E+00	6.31E-02	1.71E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	2.76E-02	4.68E-04	-5.04E+00
GWP-f	kg CO_2 equivalent	8.29E+00	6.31E-02	1.74E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-02	2.82E-02	4.65E-04	-4.98E+00
GWP-b	kg CO_2 equivalent	2.23E-01	2.20E-05	1.53E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47E-06	-6.54E-04	2.83E-06	-4.91E-02
GWP-l	kg CO_2 equivalent	1.85E-02	3.23E-05	1.21E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.21E-06	4.16E-05	3.38E-07	-5.31E-03
ODP	kg CFC-11-eq.	9.19E-08	1.07E-09	2.52E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72E-10	3.80E-10	1.10E-11	-5.10E-08
AP	mol H^+-eq.	4.33E-02	2.46E-04	1.54E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47E-05	2.28E-04	4.48E-06	-1.86E-02
EP-fw	kg P-eq.	9.91E-03	5.28E-06	2.77E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.52E-07	1.46E-05	1.22E-07	-1.71E-03
EP-m	kg N-eq.	1.40E-02	4.50E-05	7.75E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68E-05	6.87E-05	1.24E-06	-5.08E-03
EP-t	mol N-eq.	1.40E-01	4.66E-04	3.17E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80E-04	7.66E-04	1.32E-05	-5.37E-02
POCP	kg NMVOC-eq.	5.97E-02	1.72E-04	9.57E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.59E-05	2.95E-04	3.31E-06	-2.79E-02
ADPF*[2]	MJ	2.77E-03	0.00E+00	5.49E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91E-08	1.53E-06	9.74E-10	-1.20E-04
ADPE*[2]	kg Sb equivalent	1.44E+02	9.55E-01	1.95E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.51E-01	1.02E-02	-5.62E+01
WDP*[2]	m^3 world-eq. deprived	1.86E+06	4.77E-03	1.30E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74E-04	5.44E-03	5.61E-05	-1.60E+00
Resource management																
PERE	MJ	1.98E+01	1.20E-02	9.86E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	4.84E-02	1.73E-04	-1.26E+01
PERM	MJ	9.76E-02	0.00E+00	-9.76E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.99E+01	1.20E-02	9.72E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94E-03	4.84E-02	1.73E-04	-1.26E+01
PENRE	MJ	1.44E+02	9.56E-01	3.59E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.51E-01	1.02E-02	-5.62E+01
PENRM	MJ	1.64E-02	0.00E+00	-1.64E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.44E+02	9.56E-01	1.95E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54E-01	3.51E-01	1.02E-02	-5.62E+01
SM	kg	8.17E-02	4.01E-04	8.74E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.48E-05	3.56E-04	3.88E-06	-5.52E-01
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	2.01E-01	1.31E-04	-3.45E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13E-05	1.43E-04	1.02E-05	-4.52E-02
Categories of waste																
HWD	kg	4.01E-01	7.01E-04	3.18E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13E-04	1.02E-03	8.72E-06	-1.52E+00
NHWD	kg	3.50E+01	2.24E-02	1.27E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62E-03	5.73E-02	2.60E-04	-7.99E+00
RWD	kg	4.03E-04	0.00E+00	1.35E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34E-08	3.71E-07	3.20E-09	-7.74E-05
Output material flows																
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	6.98E-03	0.00E+00	9.30E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20E-06	9.59E-01	7.08E-08	-1.28E-03
MER	kg	3.46E-05	0.00E+00	7.23E-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.52E-09	5.14E-08	3.18E-10	-6.95E-05
EE	MJ	1.31E-01	0.00E+00	7.72E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76E-05	2.03E-04	1.75E-06	-1.04E-01

Key:
GWP-t – global warming potential - total **GWP-f** – global warming potential fossil fuels **GWP-b** – global warming potential - biogenic **GWP-l** – global warming potential - land use and land use change **ODP** – ozone depletion potential **AP** - acidification potential **EP-fw** - eutrophication potential - aquatic freshwater **EP-m** - eutrophication potential - aquatic marine **EP-t** - feutrophication potential - terrestrial **POCP** - photochemical ozone formation potential **ADPF*[2]** - abiotic depletion potential – fossil resources **ADPE*[2]** - abiotic depletion potential - minerals&metals **WDP*[2]** - Water (user) deprivation potential **PERE** - Use of renewable primary energy **PERM** - use of renewable primary energy resources **PERT** - total use of renewable primary energy resources **PENRE** - use of non-renewable primary energy **PENRM** - use of non-renewable primary energy resources **PENRT** - total use of non-renewable primary energy resources **SM** - use of secondary material **RSF** - use of renewable secondary fuels **NRSF** - use of non-renewable secondary fuels **FW** - net use of fresh water **HWD** - hazardous waste disposed **NHWD** - non-hazardous waste disposed **RWD** - radioactive waste disposed **CRU** - components for re-use **MFR** - materials for recycling **MER** - materials for energy recovery **EE** - exported energy

Results per 1 kg PureFlow Crimp																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Additional environmental impact indicators																
PM	Disease incidence	3.06E-07	6.12E-09	2.17E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08E-09	4.19E-09	7.13E-11	-4.01E-07
IRP*[1]	kBq U235-eq.	1.62E+00	8.67E-04	6.29E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41E-04	1.49E-03	1.33E-05	-3.11E-01
ETP-fw*[2]	CTUe	7.87E+02	5.05E-01	3.88E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.13E-02	2.73E-01	4.41E-03	-2.01E+01
HTP-c*[2]	CTUh	2.87E-08	0.00E+00	1.36E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57E-12	3.99E-11	2.61E-13	-3.18E-08
HTP-nc*[2]	CTUh	8.43E-07	2.80E-11	6.28E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12E-10	1.74E-09	2.95E-12	-1.14E-07
SQP*[2]	dimensionless	4.04E+01	9.40E-01	1.47E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55E-01	6.12E-01	2.30E-02	-2.58E+01

Key:
PM – particulate matter emissions potential **IRP*[1]** – ionizing radiation potential – human health **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **SQP*[2]** – soil quality potential

Results per 1 lbs PureFlow Crimp according to TRACI																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	2.12E+00	1.59E-02	3.30E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.65E-03	0.00E+00	4.57E-04	-4.94E+00
ODP	kg CFC-11-eq.	2.51E-08	2.97E-10	6.96E-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73E-11	0.00E+00	1.17E-11	-6.10E-08
POCP	kg O_3-eq.	2.07E-01	7.92E-04	5.06E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.84E-04	0.00E+00	8.08E-05	-3.17E-01
EP-t	kg N-eq.	1.94E-02	1.37E-05	3.16E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.51E-06	0.00E+00	1.18E-06	-1.55E-02
AP	kg CO_2 equivalent	1.29E-02	3.77E-05	3.07E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05E-05	0.00E+00	2.97E-06	-2.37E-02
Additional environmental impact indicators																
PM	kg PM2.5-eq.	4.17E-03	9.82E-06	2.57E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69E-06	0.00E+00	4.57E-07	-1.46E-02
ETP-fw*[2]	CTUe	2.81E+02	1.50E-01	2.93E+02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.43E-02	0.00E+00	1.61E-01	-2.24E+02
HTP-c*[2]	CTUh	8.61E-07	0.00E+00	4.95E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87E-10	0.00E+00	1.64E-10	-1.11E-05
HTP-nc	CTUh	9.86E-06	1.16E-09	5.03E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44E-10	0.00E+00	7.36E-09	-2.74E-06

Key:
GWP-t – global warming potential - total **ODP** – ozone depletion potential **POCP** - photochemical ozone formation potential **EP-t** - eutrophication potential - total **AP** - acidification potential **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **PM** – particulate matter emissions potential

Disclaimers:

*1 This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionising radiation from the soil, from radon and from some building materials is also not measured by this indicator.

*2 The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Results per 1 linear metre of Pex pipe																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	1.09E+00	2.37E-02	6.13E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01E-03	2.52E-02	7.25E-03	-9.31E-01
GWP-f	kg CO_2 equivalent	1.09E+00	2.37E-02	6.13E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01E-03	2.52E-02	7.20E-03	-9.28E-01
GWP-b	kg CO_2 equivalent	3.04E-03	8.27E-06	6.13E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33E-06	-5.26E-06	4.38E-05	-2.64E-03
GWP-l	kg CO_2 equivalent	6.44E-04	1.22E-05	5.66E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00E-06	1.53E-05	5.24E-06	-1.03E-03
ODP	kg CFC-11-eq.	4.52E-09	4.01E-10	1.21E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.60E-11	1.22E-10	1.70E-10	-9.08E-09
AP	mol H^+-eq.	4.56E-03	9.27E-05	1.87E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.48E-05	4.12E-05	6.93E-05	-2.77E-03
EP-fw	kg P-eq.	3.78E-04	1.99E-06	1.72E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26E-07	2.83E-06	1.89E-06	-2.42E-04
EP-m	kg N-eq.	8.83E-04	1.69E-05	4.67E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44E-06	2.56E-05	1.92E-05	-6.65E-04
EP-t	mol N-eq.	8.94E-03	1.75E-04	4.80E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.88E-05	1.26E-04	2.05E-04	-6.81E-03
POCP	kg NMVOC-eq.	4.58E-03	6.46E-05	2.93E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76E-05	4.04E-05	5.12E-05	-3.24E-03
ADPF*[2]	MJ	3.66E-06	0.00E+00	3.70E-09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12E-08	8.97E-08	1.51E-08	-1.17E-06
ADPE*[2]	kg Sb equivalent	3.18E+01	3.59E-01	9.00E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.91E-02	7.73E-02	1.57E-01	-1.72E+01
WDP*[2]	m^3 world-eq. deprived	7.58E+04	1.79E-03	5.74E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97E-04	3.12E-03	8.69E-04	-2.22E-01
Resource management																
PERE	MJ	9.37E-01	4.52E-03	7.74E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42E-04	9.24E-03	2.68E-03	-7.91E-01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	9.37E-01	4.52E-03	7.74E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42E-04	9.24E-03	2.68E-03	-7.91E-01
PENRE	MJ	2.40E+01	3.59E-01	9.00E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.91E-02	-4.67E+00	1.28E+01	-1.72E+01
PENRM	MJ	7.85E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	4.75E+00	-1.26E+01	0.00E+00
PENRT	MJ	3.18E+01	3.59E-01	9.00E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.91E-02	7.73E-02	1.57E-01	-1.72E+01
SM	kg	1.70E-03	1.51E-04	1.34E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.48E-05	5.04E-04	6.00E-05	-1.40E-03
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.46E-03	4.92E-05	1.31E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.15E-06	5.94E-05	1.58E-04	-2.74E-03
Categories of waste																
HWD	kg	2.48E-02	2.64E-04	1.02E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.33E-05	5.85E-04	1.35E-04	-2.52E-02
NHWD	kg	1.73E+00	8.43E-03	7.89E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39E-03	1.08E-02	4.02E-03	-1.12E+00
RWD	kg	1.17E-05	0.00E+00	1.07E-08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28E-08	1.81E-07	4.95E-08	-1.63E-05
Output material flows																
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.87E-04	0.00E+00	8.23E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.60E-07	1.37E-01	1.10E-06	-2.08E-04
MER	kg	3.99E-07	0.00E+00	1.11E-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.50E-09	5.42E-08	4.93E-09	-3.85E-07
EE	MJ	3.96E-03	0.00E+00	4.20E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06E-05	1.21E-04	2.71E-05	-1.49E-03

Key:
GWP-t – global warming potential - total **GWP-f** – global warming potential fossil fuels **GWP-b** – global warming potential - biogenic **GWP-l** – global warming potential - land use and land use change **ODP** – ozone depletion potential **AP** - acidification potential **EP-fw** - eutrophication potential - aquatic freshwater **EP-m** - eutrophication potential - aquatic marine **EP-t** - feutrophication potential - terrestrial **POCP** - photochemical ozone formation potential **ADPF*[2]** - abiotic depletion potential – fossil resources **ADPE*[2]** - abiotic depletion potential - minerals&metals **WDP*[2]** - Water (user) deprivation potential **PERE** - Use of renewable primary energy **PERM** - use of renewable primary energy resources **PERT** - total use of renewable primary energy resources **PENRE** - use of non-renewable primary energy **PENRM** - use of non-renewable primary energy resources **PENRT** - total use of non-renewable primary energy resources **SM** - use of secondary material **RSF** - use of renewable secondary fuels **NRSF** - use of non-renewable secondary fuels **FW** - net use of fresh water **HWD** - hazardous waste disposed **NHWD** - non-hazardous waste disposed **RWD** - radioactive waste disposed **CRU** - components for re-use **MFR** - materials for recycling **MER** - materials for energy recovery **EE** - exported energy

Results per 1 linear metre of Pex pipe																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Additional environmental impact indicators																
PM	Disease incidence	4.19E-08	2.30E-09	1.60E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.13E-10	1.14E-09	1.10E-09	-2.88E-08
IRP*[1]	kBq U235-eq.	4.92E-02	3.26E-04	5.10E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.38E-05	7.08E-04	2.06E-04	-6.69E-02
ETP-fw*[2]	CTUe	2.97E+00	1.90E-01	1.84E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11E-02	8.23E-02	6.83E-02	-1.74E+00
HTP-c*[2]	CTUh	2.47E-10	0.00E+00	1.83E-13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75E-12	3.34E-11	4.04E-12	-1.83E-10
HTP-nc*[2]	CTUh	7.71E-09	1.05E-11	5.70E-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.30E-11	2.22E-10	4.57E-11	-5.31E-09
SQP*[2]	dimensionless	1.40E+00	3.53E-01	7.95E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.94E-02	1.43E-01	3.56E-01	-1.13E+00

Key:
PM – particulate matter emissions potential **IRP*[1]** – ionizing radiation potential – human health **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **SQP*[2]** – soil quality potential

Results per 1 linear metre of Pex pipe according to TRACI																
	Unit	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Core indicators																
GWP-t	kg CO_2 equivalent	6.70E-01	1.47E-02	3.82E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49E-03	0.00E+00	7.07E-03	-9.13E-01
ODP	kg CFC-11-eq.	3.10E-09	2.75E-10	7.99E-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.45E-11	0.00E+00	1.81E-10	-9.71E-09
POCP	kg O_3-eq.	3.77E-02	7.31E-04	1.85E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68E-04	0.00E+00	1.25E-03	-4.27E-02
EP-t	kg N-eq.	1.92E-03	1.27E-05	8.62E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.36E-06	0.00E+00	1.82E-05	-1.93E-03
AP	kg CO_2 equivalent	2.50E-03	3.48E-05	1.51E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.90E-06	0.00E+00	4.59E-05	-2.80E-03
Additional environmental impact indicators																
PM	kg PM2.5-eq.	6.87E-04	9.07E-06	3.48E-07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-06	0.00E+00	7.08E-06	-7.18E-04
ETP-fw*[2]	CTUe	5.62E+00	1.38E-01	7.39E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29E-02	0.00E+00	2.49E+00	-4.31E+00
HTP-c*[2]	CTUh	4.01E-08	0.00E+00	1.58E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76E-10	0.00E+00	2.53E-09	-4.16E-08
HTP-nc	CTUh	1.09E-07	1.07E-09	6.88E-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.06E-10	0.00E+00	1.14E-07	-1.10E-07

Key:
GWP-t – global warming potential - total **ODP** – ozone depletion potential **POCP** - photochemical ozone formation potential **EP-t** - eutrophication potential - total **AP** - acidification potential **ETP-fw*[2]** - Eco-toxicity potential – freshwater **HTP-c*[2]** - Human toxicity potential – cancer effects **HTP-nc*[2]** - Human toxicity potential – non-cancer effects **PM** – particulate matter emissions potential

Disclaimers:
*1 This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionising radiation from the soil, from radon and from some building materials is also not measured by this indicator.

*2 The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

6.4 Interpretation, LCA presentation and critical review

Evaluation

The environmental impacts of

- ManaBloc
- PureFlow Press
- PureFlow Crimp
- Pex pipe

differ strongly/significantly from each other. The differences in the environmental impact of the products lie in the various pre-products and raw materials used and in the mass of the pre-products and raw materials used in each case. Increasing the proportion of recycling can reduce these environmental impacts.

The main environmental impact of production is caused by silicon bronze in PureFlow Press, brass in PureFlow Crimp, PE in ManaBloc and PA in Pex pipes. Energy and ancillary materials play a subordinate role.

Another striking feature of ManaBloc is the biogenic carbon. This figure is based on the high proportion of cardboard packaging.

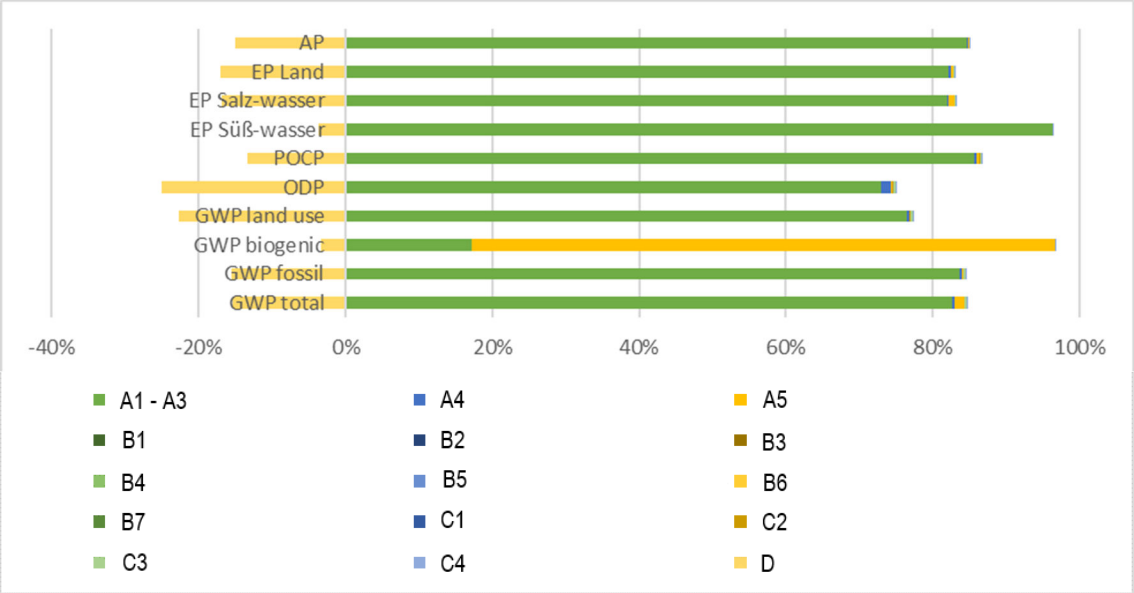
The LCA covers the complete life cycle. As the products do not generate any emissions in the use stage, here the value is 0.00. The replacement was balanced separately in B4 for 1 year as a scenario. Otherwise, there is no environmental impact during the use phase.

The PureFlow Press and PureFlow Crimp products mentioned above result in higher credits due to the metal at the end of life (depending on the environmental indicator). The charts below show the allocation of the main environmental impacts.

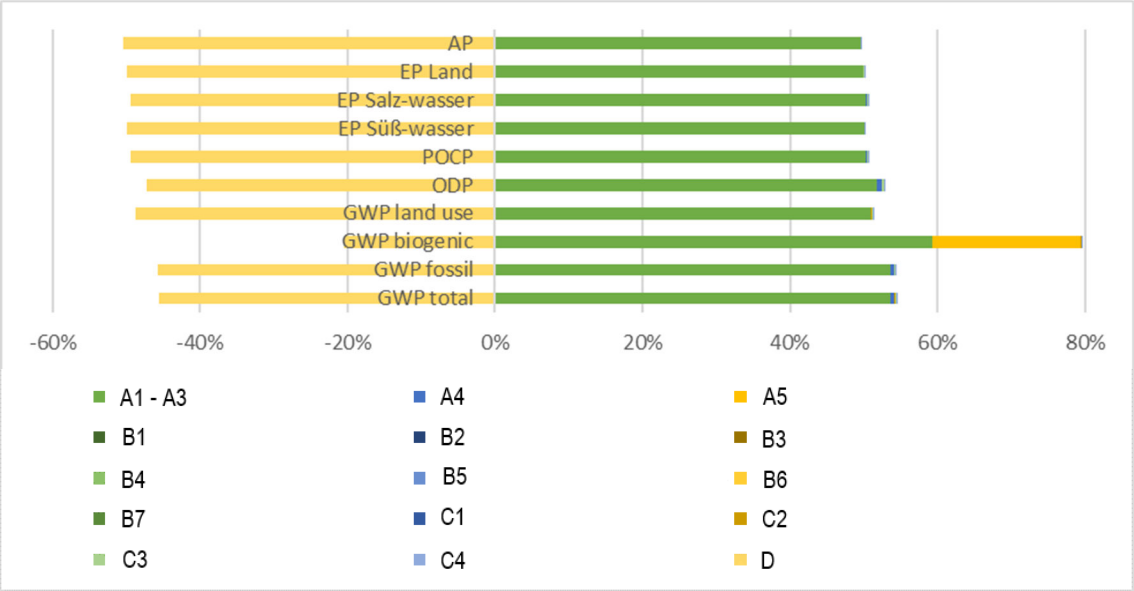
The values obtained from the LCA calculation are suitable for the certification of buildings.

Diagrams

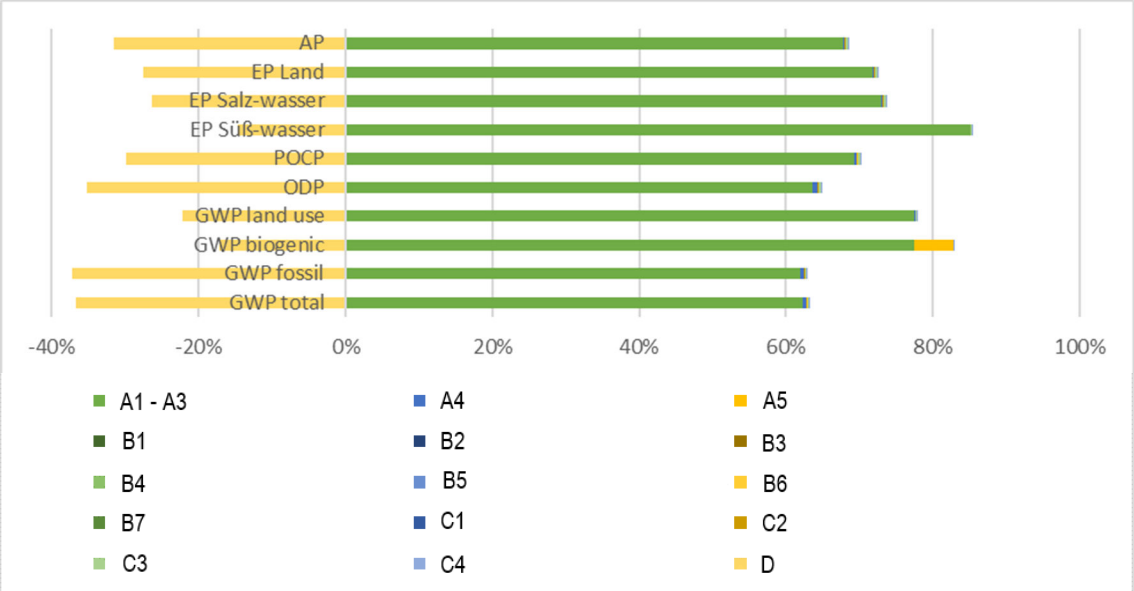
ManaBloc



PureFlow Press



PureFlow Crimp



Pex pipe

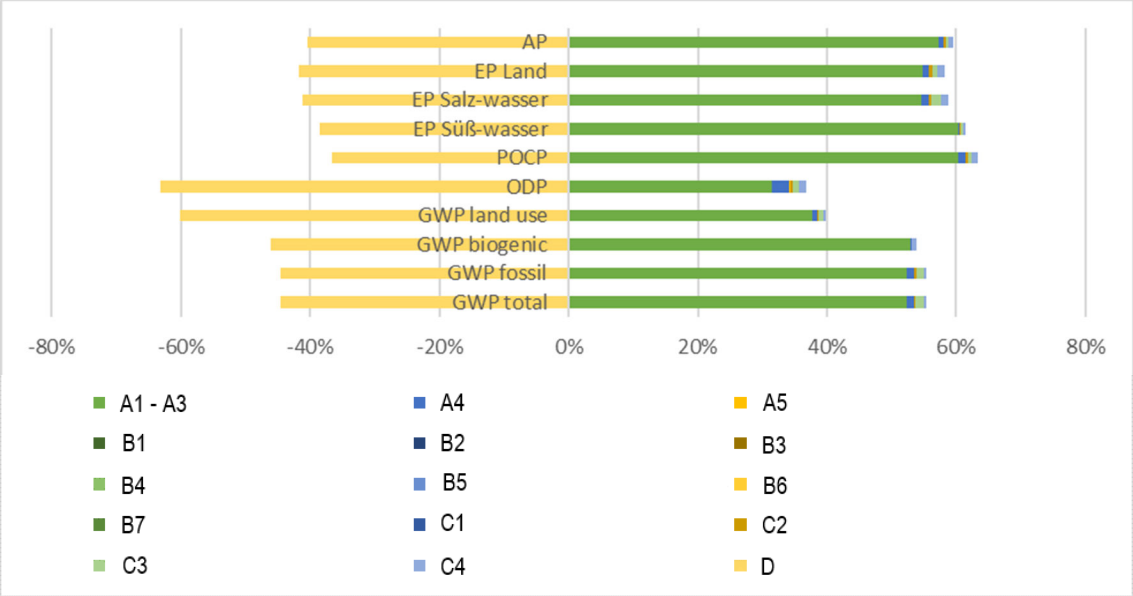


Illustration 3 Percentage of the modules in selected environmental impact indicators

Report The LCA report underlying this EPD was developed according to the requirements of DIN EN ISO 14040 and DIN EN ISO 14044 as well as DIN EN 15804 and DIN EN ISO 14025. It is deposited with ift Rosenheim. The results and conclusions reported to the target group are complete, correct, without bias and transparent. The results of the study are not designed to be used for comparative statements intended for publication.

Critical review The critical review of the LCA and of the report took place in the course of verification of the EPD and was carried out by the external auditor Prof. Dr. Eric Brehm.

7 General information regarding the EPD

Comparability This EPD was prepared in accordance with DIN EN 15804 and is therefore only comparable to those EPDs that also comply with the requirements set out in DIN EN 15804.
Any comparison must refer to the building context and the same boundary conditions of the various life cycle stages.
For comparing EPDs of construction products, the rules set out in DIN EN 15804, Clause 5.3, apply.

The detailed individual results of the products were summarised on the basis of conservative assumptions and differ from the average results. Identification of the product groups and the resulting variations are documented in the background report.

Communication The communications format of this EPD meets the requirements of EN 15942:2012 and is therefore the basis for B2B communication. Only the nomenclature has been changed according to DIN EN 15804.

Verification Verification of the Environmental Product Declaration is documented in accordance with the ift "Richtlinie zur Erstellung von Typ III Umweltproduktdeklarationen" (Guidance on preparing Type III Environmental Product Declarations) in accordance with the requirements set out in DIN EN ISO 14025.

This declaration is based on the PCR documents “PCR Part A” PCR-A-0.3:2018 and “Piping systems including connecting and fitting technology” PCR-RS-1.0:2022.

The European standard EN 15804 serves as the core PCR [a)]
Independent verification of the declaration and statement according to EN ISO 14025:2010
Independent third party verifier: [b)] Eric Brehm
[a)] Product category rules [b)] Optional for business-to-business communication Mandatory for business-to-consumer communication (see EN ISO 14025:2010. 9.4).

Revisions of this document

No.	Date	Note	Person in charge	Testing personnel
1	13.12.2023	External verification	Pscherer	Brehm

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9 Annex A

Description of life cycle scenarios for PureFlow Press connector and pipes

Product stage			Con-struction process stage		Use stage*							End-of-life stage				Benefits and loads beyond system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw material supply	Transport	production	Transport	Construction/installation process	Use	maintenance	Repair	replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/demolition	Transport	Waste processing	Disposal	Reuse Recovery Recycling potential
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* For declared B-modules, the calculation of the results is performed taking into account the specified RSL related to one year

Table 7 Overview of applied life cycle stages

The scenarios were calculated taking into account the defined RSL (see 4 Use stage).

The scenarios were furthermore based on the research project “EPDs for transparent building components”. (1)

Note: The standard scenarios selected are presented in bold type. They were also used for calculating the indicators in the summary table.

✓ Included in the LCA
— Not included in the LCA

A4 Transport to construction site

No.	Scenario	Description
A4.1	**National**	**Transport mix 35-53% capacity used[1], approx. 600 km**
A4.2	International/EU country	Transport mix 35-53% capacity used[1], approx. 2,000 km
A4.3	International/Non-EU	Transport mix 35-53% capacity used[1], approx. 15,000 km

[1] Capacity used: utilized loading capacity of the truck

The transport distances shown represent a transport average with the following transport mix. The scenarios include the return transport, if applicable.

Shipping method	Network fleet structure	Share in %		
		A4.1	A4.2	A4.3
Parcel service provider (CEP - Courier-Express- Parcel service)	Van 7.5 – 16 t (Euro 6), diesel, 35% capacity utilization	2	0	0.5
Forwarding agency and own truck fleet	32 - 40 t truck/semitrailer (Euro 6), diesel, 53% capacity utilization	98	90	85
Air freights	Cargo and passenger aircrafts, kerosene	0	9	11
Seagoing vessels/containers	Seagoing/container vessels to receiving port, heavy oil	0	1	3.5

A4 Transport to construction site	Transport weight [kg] per declared unit	Density [kg/m³]	Capacity load factor[2]
ManaBloc	1.19	7.90	0.80
PureFlow Press	1.01		
PureFlow Crimp	1.01		
Pex pipe	0.38		

[2] Capacity load factor:
= 1 Product completely fills the packaging (without air inclusion)
< 1 Packaging contains unused volume (e.g.: air, filling material)
> 1 Product is packed in compressed form

The scenarios were calculated per kg and can be scaled to the product group using the above masses.

A4 Transport to the construction site per 1 kg	Unit	A4.1	A4.2	A4.3
Core indicators				
GWP-t	kg CO_2 equivalent	**6.27E-05**	3.33E-04	2.81E-03
GWP-f	kg CO_2 equivalent	**6.26E-05**	3.33E-04	2.81E-03
GWP-b	kg CO_2 equivalent	**2.18E-08**	8.84E-08	7.09E-07
GWP-l	kg CO_2 equivalent	**3.21E-08**	1.06E-07	7.96E-07
ODP	kg CFC-11-eq.	**1.06E-12**	5.45E-12	4.58E-11
AP	mol H^+-eq.	**1.71E-07**	1.16E-06	1.03E-05
EP-fw	kg P-eq.	**5.24E-09**	1.74E-08	1.31E-07
EP-m	kg N-eq.	**4.47E-08**	3.98E-07	3.63E-06
EP-t	mol N-eq.	**4.62E-07**	4.21E-06	3.85E-05
POCP	kg NMVOC-eq.	**2.45E-07**	1.62E-06	1.42E-05
ADPF	MJ	**9.49E-04**	4.78E-03	4.00E-02
ADPE	kg Sb equivalent	**1.81E-10**	5.55E-10	4.09E-09
WDP	m^3 world-eq. deprived	**4.74E-06**	1.66E-05	1.27E-04
Resource management				
PERE	MJ	**1.19E-05**	4.13E-05	3.15E-04
PERM	MJ	**0.00**	0.00	0.00
PERT	MJ	**1.19E-05**	4.13E-05	3.15E-04
PENRE	MJ	**9.49E-04**	4.78E-03	4.00E-02
PENRM	MJ	**0.00**	0.00	0.00

PENRT	MJ	**9.49E-04**	4.78E-03	4.00E-02
SM	kg	**3.98E-07**	1.33E-06	1.00E-05
RSF	MJ	**0.00**	0.00	0.00
NRSF	MJ	**0.00**	0.00	0.00
FW	m^3	**1.30E-07**	4.63E-07	3.54E-06
Categories of waste				
HWD	kg	**6.96E-07**	2.36E-06	1.78E-05
NHWD	kg	**2.23E-05**	7.40E-05	5.57E-04
RWD	kg	**2.05E-10**	7.39E-10	5.69E-09
Output material flows				
CRU	kg	**0.00**	0.00	0.00
MFR	kg	**7.38E-09**	2.84E-08	2.27E-07
MER	kg	**4.16E-11**	1.35E-10	1.02E-09
EEE	MJ	**1.68E-07**	5.81E-07	4.41E-06
Additional environmental impact indicators				
PM	Disease incidence	**6.08E-12**	1.94E-11	1.43E-10
IRP	kBq U235-eq.	**8.61E-07**	3.15E-06	2.44E-05
ETPfw	CTUe	**5.01E-04**	2.44E-03	2.02E-02
HTPc	CTUh	**2.78E-14**	9.74E-14	7.45E-13
HTPnc	CTUh	**6.85E-13**	3.61E-12	3.04E-11
SQP	dimensionless	**9.33E-04**	2.92E-03	2.12E-02

A5 Construction/Installation

No.	Scenario	Description
A5	**Manual**	**According to the manufacturer. the products are installed with battery-operated pressing pliers (0.0009 kWh/kg, electricity mix (GLO)).**

In case of deviating consumption during installation/assembly of the products which forms part of the site management, they are covered at the building level.

The following quantities of waste materials are produced during installation.

Product group	Waste materials in kg	Of which quantities collected for waste recycling (output materials) in kg
ManaBloc	0.191	0.030
PureFlow Press	0.006	0.029
PureFlow Crimp	0.007	0.030
Pex pipe	0.000	0.011

Ancillary materials, consumables, use of water, use of other resources, material losses as well as direct emissions during installation are negligible.

It is assumed that the packaging material in the Module construction / installation is sent to waste handling. Waste is only thermally recycled in line with the conservative approach:

- Electricity replaces electricity mix (GLO, high voltage, market group);
- Thermal energy replaces thermal energy from natural gas (district or industrial, natural gas, RoW);
- PA / PSU recyclate from A5 replaces 100 % PA / PSU (ManaBloc);
- SiBr recyclate from A5 replaces 100 % SiBr (PureFlow Press);
- Brass recyclate from A5 replaces 100 % brass (PureFlow Crimp);
- PE recyclate from A5 replaces 100 % PE (Pex pipes).

Transport to the recycling plants is included.

Since this is a single scenario, the results are shown in the relevant summary table.

B1 Use (not relevant)
Refer to Section 4 Use stage - Emissions to the environment.
No emissions are known which may occur during the use stage of the products because press fitting is without contact to air, water and soil.

Since this is a single scenario, the results are shown in the relevant summary table.

B2 Cleaning, maintenance and repair

B2.1 Cleaning (not relevant)

No cleaning is required.

Ancillary materials, consumables, use of energy and water, material losses and waste as well as transport distances during cleaning are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

B2.2 Maintenance and repair (not relevant)

No maintenance is required.

Ancillary materials, consumables, use of energy and water, waste, material losses and transport distances during maintenance are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

B3 Repair (not relevant)
No repair of the components of the building part is required.

For updated information refer to the respective instructions for assembly/installation, operation and maintenance from Viega GmbH & Co. KG.

Ancillary materials, consumables, use of energy and water, waste, material losses and transport distances during repair are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

B4 Exchange/replacement

No.	Scenario	Description
B4.1	**No replacement**	**According to manufacturer, a replacement is not planned.**
B4.2	Normal use and heavy use	One-time replacement after 50 years (RSL)* Energy consumption 0.0009 kWh/kg.

*Assumptions for evaluation of possible environmental impacts; statements made do not constitute any guaranty or warranty of performance.

The statements made in this EPD are only informative to allow evaluation at the building level.

It is assumed that no replacement will be necessary during the 50-year reference service life and the 50-year building service life. The environmental impacts of replacement are due to the product, construction and disposal stages.
The results were based on one year, taking into account the RSL.

For updated information refer to the respective instructions for assembly/installation, operation and maintenance from Viega GmbH & Co. KG.

B4 Exchange/ replacement	Unit	B4.1	B4.2			
			ManaBloc	PureFlow Press	PureFlow Crimp	Pex pipe
Core indicators						
GWP-t	kg CO_2 equivalent	0.00	1.79E+01	1.33E+01	3.61E+00	8.87E+00
GWP-f	kg CO_2 equivalent	0.00	1.75E+01	1.32E+01	3.41E+00	8.61E+00
GWP-b	kg CO_2 equivalent	0.00	3.81E-01	5.83E-02	1.89E-01	2.38E-01
GWP-l	kg CO_2 equivalent	0.00	5.39E-03	2.35E-02	1.33E-02	1.82E-02
ODP	kg CFC-11-eq.	0.00	4.27E-08	1.41E-07	4.25E-08	8.98E-08
AP	mol H^+-eq.	0.00	7.08E-02	8.96E-01	3.23E-02	6.17E-02
EP-fw	kg P-eq.	0.00	1.53E-02	7.25E-02	8.22E-03	1.01E-02
EP-m	kg N-eq.	0.00	1.91E-02	4.68E-02	9.11E-03	1.45E-02
EP-t	mol N-eq.	0.00	1.17E-01	6.45E-01	8.75E-02	1.44E-01
POCP	kg NMVOC-eq.	0.00	5.38E-02	1.83E-01	2.52E-02	4.58E-02
ADPF	MJ	0.00	3.36E+02	1.72E+02	8.97E+01	1.61E+02
ADPE	kg Sb equivalent	0.00	1.50E-05	1.35E-02	2.65E-03	2.78E-03
WDP	m^3 world-eq. deprived	0.00	6.99E+06	5.19E+05	1.86E+06	1.94E+06
Resource management						
PERE	MJ	0.00	3.59E+01	4.28E+01	7.38E+00	2.02E+01
PERM	MJ	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	0.00	3.59E+01	4.28E+01	7.38E+00	2.02E+01
PENRE	MJ	0.00	3.36E+02	1.72E+02	8.97E+01	1.61E+02
PENRM	MJ	0.00	1.83E-15	-9.76E-19	0.00E+00	0.00E+00
PENRT	MJ	0.00	3.36E+02	1.72E+02	8.97E+01	1.61E+02
SM	kg	0.00	2.99E-02	5.50E-01	-4.69E-01	8.36E-02
RSF	MJ	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	0.00	3.34E-01	3.10E-01	1.56E-01	2.00E-01
Categories of waste						
HWD	kg	0.00	4.12E-01	1.37E+00	-1.12E+00	4.04E-01
NHWD	kg	0.00	7.16E+01	2.62E+02	2.71E+01	3.57E+01
RWD	kg	0.00	3.29E-04	3.55E-04	3.26E-04	4.00E-04
Output material flows						
CRU	kg	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00	3.60E-01	9.93E-01	9.74E-01	1.11E+00
MER	kg	0.00	9.94E-06	7.04E-05	-3.47E-05	3.48E-05
EE	MJ	0.00	2.22E-02	1.87E-01	3.49E-02	1.42E-01
Additional environmental impact indicators						
PM	Disease incidence	0.00	5.79E-07	2.17E-06	-8.10E-08	3.38E-07
IRP	kBq U235-eq.	0.00	1.47E+00	1.38E+00	1.32E+00	1.61E+00
ETPfw	CTUe	0.00	4.75E+01	1.03E+03	7.68E+02	7.90E+02
HTPc	CTUh	0.00	4.09E-09	1.35E-07	-2.99E-09	2.89E-08
HTPnc	CTUh	0.00	1.11E-07	1.17E-05	7.32E-07	8.49E-07
SQP	dimensionless	0.00	2.67E+01	2.93E+02	1.64E+01	4.33E+01

B5 Improvement/modernisation (not relevant)
According to the manufacturer, the elements are not included in the improvement/modernisation activities for buildings.

For updated information refer to the respective instructions for assembly/installation, operation and maintenance from Viega GmbH & Co. KG.

Ancillary materials, consumables, use of energy and water, material losses, waste as well as transport distances during replacement are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

B6 Operational energy use (not relevant)
There is no energy used during normal use.

Ancillaries, consumables, water use, material losses, waste materials, transport distances and other scenarios are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

B7 Operational water use (not relevant)
No water consumption when used as intended. Water consumption for cleaning is specified in Module B2.1.

Ancillaries, consumables, energy use, material losses, waste materials, transport distances and other scenarios are negligible.

Since this is a single scenario, the results are shown in the relevant summary table.

C1 Deconstruction

No.	Scenario	Description
C1	Deconstruction	**Connecting technology 99% deconstruction.** **Further deconstruction rates are possible, give adequate reasons.**

No relevant inputs or outputs apply to the scenario selected. Energy consumption during dismantling is not required.

Since this is a single scenario, the results are shown in the relevant summary table.

In case of deviating consumption the removal of the products forms part of site management and is covered at the building level.

C2 Transport

No.	Scenario	Description
C2	Transport	Transport to collection point with >32 t truck (Euro 4), diesel, 29.96 t payload, 53% capacity used, 50 km (1)

Since this is a single scenario, the results are shown in the relevant summary table.

C3 Waste management

No.	Scenario	Description
C3	Current market situation	**Share for recirculation of materials:** • **(Stainless) Steel 98% in melt** (UBA, 2017) • **Remaining metals 97 % in melt** (UBA, 2017) • **Plastics 60 % thermal recycling in incineration plants** (Zukunft Bauen, 2017) • **Plastics 40 % recycled** (Zukunft Bauen, 2017) • **Remainder to landfill/disposal**

No electricity consumption for the recycling plant per declared unit was taken into account for waste treatment due to the low proportion and lack of sources.

As the products are placed on the European market, the disposal scenario is based on average European data sets.

The below table presents the disposal processes and their percentage by mass/weight. The calculation is based on the above mentioned shares in percent related to the declared unit of the product system.

C3 Disposal	Unit	ManaBloc	PureFlow Press	PureFlow Crimp	Pex pipe
Collection process, collected separately	kg	0.99	0.99	0.99	0.38
Collection process, collected as mixed construction waste	kg	0.01	0.01	0.01	0.00
Recovery system, for re-use	kg	0.00	0.00	0.00	0.00
Recovery system, for recycling	kg	0.40	0.96	0.96	0.15
Recovery system, for energy recovery	kg	0.59	0.00	0.00	0.23
Disposal	kg	0.01	0.04	0.04	0.00

The 100% scenarios differ from the current average recovery shown here (in background report C3.4). The evaluation of each scenario is described in the background report.

Since this is a single scenario, the results are shown in the summary table.

C4 Disposal		
No.	**Scenario**	**Description**
C4	**Disposal**	**The non-recordable amounts and losses within the re-use/recycling chain (C1 and C3) are modelled as "disposed" (EU-28).**

The 100% scenarios differ from the current average recovery shown here (in background report C4.4). The evaluation of each scenario is described in the background report.

The consumption in scenario C4 results from physical pre-treatment, waste recycling and management of the disposal site. The benefits obtained here from the substitution of primary material production are allocated to Module D, e.g. electricity and heat from waste incineration.

Since this is a single scenario, the results are shown in the summary table.

D Benefits and loads from beyond the system boundaries		
No.	**Scenario**	**Description**
D	**Recycling potential**	**Stainless steel scrap from C3 excluding the scrap used in A3 replaces 100% of stainless steel; Plastic recyclate from C3 excluding the plastics used in A3 replaces 60% of tetrafluoroethylene; Benefits from incineration plant: Electricity replaces electricity mix (GLO), thermal energy replaces thermal energy from natural gas (RoW).**

The values in Module D result from recycling of the packaging material in Module A5 and from deconstruction at the end of service life.

The 100% scenarios differ from the current average recovery shown here (in background report D4). The evaluation of each scenario is described in the background report.

Since this is a single scenario, the results are shown in the summary table.

10 Annex B

Press connector: Conversion table for unit weights

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
567041	Pureflow Crimp (USA)	Poly PEX Press	V5644ZLAdapter 3/4PEXx1/2FNPT 5SA 9	Adapter	V5644ZL	3/4PEX X 1/2FNPT	491325	175	0.175	0.386
567051	Pureflow Crimp (USA)	Poly PEX Press	V5645ZLElbow 3/4PEXx1/2FNPT 5SA 9	Elbow	V5645ZL	3/4PEX X 1/2FNPT	491356	175	0.175	0.386
567061	Pureflow Crimp (USA)	Poly PEX Press	V5645ZLElbow 1PEXx1/2FNPT 5SA 9	Elbow	V5645ZL	1PEX X 1/2FNPT	491455	185	0.185	0.408
567142	Pureflow Crimp (USA)	Poly PEX Press	V5644ZLAdapter 1PEXx1/2FNPT 5SA 9	Adapter	V5644ZL	1PEX X 1/2FNPT	491448	175	0.175	0.386
572040	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 3/8x14 5 Z 9	Manifold	V5630	3/8 X 14	491424	2323.525	2.324	5.122
572050	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 1/2x14 5 Z 9	Manifold	V5630	1/2 X 14	491431	2356.977	2.357	5.196
572060	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 1/2x18 5 Z 9	Manifold	V5630	1/2 X 18	491837	2780.518	2.781	6.13
572070	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 1/2x24 5 Z 9	Manifold	V5630	1/2 X 24	492438	3728.529	3.729	8.22
572080	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 1/2x30 5 Z 9	Manifold	V5630	1/2 X 30	493039	4460.925	4.461	9.835
572090	ManaBloc (USA)	Pexfit-Manifold	V5630 Manifold 1/2x36 5 Z 9	Manifold	V5630	1/2 X 36	493633	5116.517	5.117	11.28
572100	ManaBloc (USA)	Pexfit-Manifold	V5640 Manifold 3/8x1/2x18 5 Z 9	Manifold	V5640	3/8 X 1/2 X 18	491868	3066.284	3.066	6.76
572110	ManaBloc (USA)	Pexfit-Manifold	V5640 Manifold 3/8x1/2x24 5 Z 9	Manifold	V5640	3/8 X 1/2 X 24	492469	3708.118	3.708	8.175
572120	ManaBloc (USA)	Pexfit-Manifold	V5640 Manifold 3/8x1/2x30 5 Z 9	Manifold	V5640	3/8 X 1/2 X 30	493060	4603.963	4.604	10.15
572130	ManaBloc (USA)	Pexfit-Manifold	V5640 Manifold 3/8x1/2x36 5 Z 9	Manifold	V5640	3/8 X 1/2 X 36	493664	5356.926	5.357	11.81
572140	ManaBloc (USA)	Pexfit-Manifold	V5650 Manifold 1/2x3 5 Z 9	Manifold	V5650	1/2 X 3	490335	818.733	0.819	1.805
572150	ManaBloc (USA)	Pexfit-Manifold	V5650 Manifold 1/2x4 5 Z 9	Manifold	V5650	1/2 X 4	490434	910.585	0.911	2.007
572160	ManaBloc (USA)	Pexfit-Manifold	V5650 Manifold 1/2x6 5 Z 9	Manifold	V5650	1/2 X 6	490632	1114.48	1.114	2.457
572170	ManaBloc (USA)	Pexfit-Manifold	V5650 Manifold 1/2x8 5 Z 9	Manifold	V5650	1/2 X 8	490830	1513.863	1.514	3.337
572180	ManaBloc (USA)	Pexfit-Manifold	V5660 Manifold 1/2x5 5 Z 9	Manifold	V5660	1/2 X 5	494531	993.366	0.993	2.19
572190	ManaBloc (USA)	Pexfit-Manifold	V5660 Manifold 1/2x7 5 Z 9	Manifold	V5660	1/2 X 7	494739	1420.196	1.42	3.131
572200	ManaBloc (USA)	Pexfit-Manifold	V5660 Manifold 1/2x10 5 Z 9	Manifold	V5660	1/2 X 10	494104	1724.783	1.725	3.802
572221	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 3/8PEX E Z 9	Sleeve	V56153	3/8 PEX	499017	4.308	0.004	0.009
572230	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 1/2PEX E Z 9	Sleeve	V56153	1/2 PEX	499024	5.443	0.005	0.012
572240	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 3/4PEX E Z 9	Sleeve	V56153	3/4 PEX	499031	6.803	0.007	0.015
572250	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 1PEX E Z 9	Sleeve	V56153	1 PEX	499048	11.339	0.011	0.025
572260	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 11/4PEX E Z 9	Sleeve	V56153	1 1/4 PEX	499055	24.04	0.024	0.053
572270	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 11/2PEX E Z 9	Sleeve	V56153	1 1 /2 PEX	499062	29.483	0.029	0.065
572280	Pureflow Press (USA)	Pexcel Pureflow Accessory	V56153 Sleeve 2PEX E Z 9	Sleeve	V56153	2 PEX	496078	38.555	0.039	0.085
615941	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 11/4 5 A 9	Plug	V5656	1 1/4	497709	37.195	0.037	0.082
615951	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 11/2 5 A 9	Plug	V5656	1 1/2	497808	43.091	0.043	0.095
615961	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 2 5 A 9	Plug	V5656	2	497907	70.037	0.07	0.154
638345	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x14 5 Z 9	Manifold	V50305	3/8 X 14	501420	2256.62	2.257	4.975
638349	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x14 5 Z 9	Manifold	V50305	1/2 X 14	501437	2278.165	2.278	5.022
638357	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x18 5 Z 9	Manifold	V50305	1/2 X 18	502502	2694.336	2.694	5.94
638365	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x24 5 Z 9	Manifold	V50305	1/2 X 24	502434	3501.733	3.502	7.72
638373	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x30 5 Z 9	Manifold	V50305	1/2 X 30	503035	4154.146	4.154	9.158
638378	ManaBloc (USA)	Pexfit-Manifold	V5030 Manifold 1/2x36 5 Z 9	Manifold	V5030	1/2 X 36	363639	5234.456	5.234	11.54
638381	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x36 5 Z 9	Manifold	V50305	1/2 X 36	503639	4843.606	4.844	10.678
638389	ManaBloc (USA)	Pexfit-Manifold	V503051Manifold 3/8x1/2x30 5 Z 9	Manifold	V503051	3/8 X 1/2 X 30	506302	4226.721	4.227	9.318

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
638393	ManaBloc (USA)	Pexfit-Manifold	V503051Manifold 3/8x1/2x36 5 Z 9	Manifold	V503051	3/8 X 1/2 X 36	506364	4924.496	4.924	10.857
638401	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x3 5 Z 9	Manifold	V50315	1/2 X 3	500331	783.58	0.784	1.727
638409	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x4 5 Z 9	Manifold	V50315	1/2 X 4	500430	870.896	0.871	1.92
638417	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x5 5 Z 9	Manifold	V50315	1/2 X 5	500539	864	0.864	1.905
638425	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x6 5 Z 9	Manifold	V50315	1/2 X 6	500638	1104.496	1.104	2.435
638433	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x8 5 Z 9	Manifold	V50315	1/2 X 8	500836	1451.494	1.451	3.2
638441	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 1/2x10 5 Z 9	Manifold	V50315	1/2 X 10	501031	1689.63	1.69	3.725
638464	ManaBloc (USA)	Pexfit-Manifold	V503051Manifold 3/8x1/2x24 5 Z 9	Manifold	V503051	3/8 X 1/2 X 24	506241	3414.98	3.415	7.529
638465	ManaBloc (USA)	Pexfit-Manifold	V503051Manifold 3/8x1/2x26 5 Z 9	Manifold	V503051	3/8 X 1/2 X 26	506265	3540	3.54	7.804
638466	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x12 5 Z 9	Manifold	V50305	3/8 X 12	502441	1821.171	1.821	4.015
638467	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x18 5 Z 9	Manifold	V50305	3/8 X 18	502458	2574	2.574	5.675
638468	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x24 5 Z 9	Manifold	V50305	3/8 X 24	502472	3295	3.295	7.264
638469	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x30 5 Z 9	Manifold	V50305	3/8 X 30	502489	4016	4.016	8.854
638473	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 3/8x36 5 Z 9	Manifold	V50305	3/8 X 36	502496	4674.265	4.674	10.305
638475	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 3/8x4 5 Z 9	Manifold	V50315	3/8 X 4	500218	728	0.728	1.605
638476	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 3/8x6 5 Z 9	Manifold	V50315	3/8 X 6	500225	991	0.991	2.185
638477	ManaBloc (USA)	Pexfit-Manifold	V50315 Manifold 3/8x8 5 Z 9	Manifold	V50315	3/8 X 8	500249	1251	1.251	2.758
638478	ManaBloc (USA)	Pexfit-Manifold	M3000 Muster Homerun-manifold 5 Z 9	Muster	M3000	HOMERUN-MANIFOLD	500256	100	0.1	0.22
639981	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 2 5 A 9	Elbow	V5616	2	492902	171.231	0.171	0.377
640111	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 2x11/2 5 A 9	Coupling	V5615	2 X 1 1/2	493985	122.469	0.122	0.27
640121	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 2 5 A 9	Coupling	V5615	2	494098	138.345	0.138	0.305
641301	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2 5 A 9	Tee	V5618	2	495903	226.796	0.227	0.5
641311	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x11/2x1 5 A 9	Tee	V5618	2 X 11/2 X1	499857	142.881	0.143	0.315
641321	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x11/2x11/4 5 A 9	Tee	V5618	2 X 11/2 X 11/4	499871	165.561	0.166	0.365
641331	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x11/2x11/2 5 A 9	Tee	V5618	2 X 11/2 X 11/2	499888	176.901	0.177	0.39
641341	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x2x3/4 5 A 9	Tee	V5618	2 X 2 X 3/4	499949	161.025	0.161	0.355
641351	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x2x1 5 A 9	Tee	V5618	2 X 2 X 1	499956	169.341	0.169	0.373
641361	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x2x11/4 5 A 9	Tee	V5618	2 X 2 X 11/4	499970	183.705	0.184	0.405
641371	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x2x11/2 5 A 9	Tee	V5618	2 X 2 X 11/2	499987	197.312	0.197	0.435
648308	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5095 Clip 3/8 5 A 9	Clip	V5095	3/8	521107	0.953	0.001	0.002
648310	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5095 Clip 1/2 5 A 9	Clip	V5095	1/2	521206	1.382	0.001	0.003
648312	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5095 Clip 3/4 5 A 9	Clip	V5095	3/4	521404	1.769	0.002	0.004
648314	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5094 Clip 3/8insulator 5 A 9	Clip	V5094	3/8 INSULATOR	551005	8.301	0.008	0.018
648318	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5094 Clip 1/2insulator 5 A 9	Clip	V5094	1/2 INSULATOR	551203	8.618	0.009	0.019
648320	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5094 Clip 3/4insulator 5 A 9	Clip	V5094	3/4 INSULATOR	551401	6	0.006	0.013
648322	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5094 Clip 1insulator 5 A 9	Clip	V5094	1 INSULATOR	551609	5.987	0.006	0.013
648345	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5096 Band 3/4x1/16x1000 5 A 9	Band	V5096	3/4 X 1/16 X 1000	565101	8164.746	8.165	18
648346	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5096 Band 3/4x1/16x50 5 A 9	Band	V5096	3/4 X 1/16 X 50	565507	396.893	0.397	0.875
648348	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5071 Clip tubesupport 5EC 9	Clip	V5071	TUBE SUPPORT	521305	34.599	0.035	0.076
648661	Pureflow Press (USA)	Poly PEX Press	V50381 Adapter 1/2 5 A 9	Adapter	V50381	1/2	501352	18.143	0.018	0.04

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
648673	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5097 Fixing tape 14x120 5 Z 9	Fixing tape	V5097	14 X 120	437149	5.94	0.006	0.013
648957	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5038 Brackets-Set - 7 H 9	Brackets-Set	V5038	-	457161	326.586	0.327	0.72
649014	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50397 Tee-Handle - 5 L 9	Tee-Handle	V50397	-	506012	11	0.011	0.024
649076	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5099 Plate 14x18 5 Z 9	Plate	V5099	14 X 18	507187	612.35	0.612	1.35
649078	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5099 Plate 14x26 5 Z 9	Plate	V5099	14 X 26	507262	22.679	0.023	0.05
649080	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5099 Plate 14x30 5 Z 9	Plate	V5099	14 X 30	507309	1104.496	1.104	2.435
649082	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5099 Plate 14x39 5 Z 9	Plate	V5099	14 X 39	507392	1474.174	1.474	3.25
649086	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50991 Plate 14x40firerated 7 C 9	Plate	V50991	14 X 40 FIRE RATED	507408	11913.636	11.914	26.265
649135	Pureflow Crimp (USA)	Pexel KS Fittings	V54040 Adapter 1/2PEXxManablocS 5 Z 9	Adapter	V54040	1/2PEXXMANABLOCS	560311	38.556	0.039	0.085
649136	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503623 fork wrench Manabloc 7 Z 9	fork wrench	V503623	MANABLOC WRENCH	506319	272.16	0.272	0.6
649861	ManaBloc (USA)	Pexfit-Manifold	V50308 Manifold 1 5 Z 9	Manifold	V50308	1	366418	1821.171	1.821	4.015
652385	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5081 Riser pipe 3/8x12 5 B 9	Riser pipe	V5081	3/8 X 12	571126	13.955	0.014	0.031
652389	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5081 Riser pipe 3/8x20 5 B 9	Riser pipe	V5081	3/8 X 20	571201	22.679	0.023	0.05
652401	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5080 Riser pipe 3/8x20 5 B 9	Riser pipe	V5080	3/8 X 20	581200	20.88	0.021	0.046
652403	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5080 Riser pipe 3/8x30 5 B 9	Riser pipe	V5080	3/8 X 30	581309	30.947	0.031	0.068
652405	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5080 Riser pipe 3/8x36 5 B 9	Riser pipe	V5080	3/8 X 36	581361	38.6	0.039	0.085
652457	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5086 Support sleeve 3/8 E 1 9	Support sleeve	V5086	3/8	561103	1.588	0.002	0.004
652459	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5086 Support sleeve 1/2 E 1 9	Support sleeve	V5086	1/2	561202	2.227	0.002	0.005
652461	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5086 Support sleeve 3/4 E 1 9	Support sleeve	V5086	3/4	561400	4.627	0.005	0.01
652468	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5088 Cover 3/8 5 B 9	Cover	V5088	3/8	531151	5.273	0.005	0.012
652470	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50881 Cover doublehole3/8 5 B 9	Cover	V50881	DOUBLE HOLE 3/8	531168	7.665	0.008	0.017
652472	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5088 Cover 1/2 5 B 9	Cover	V5088	1/2	531205	5.636	0.006	0.012
652474	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50881 Cover doublehole1/2 5 B 9	Cover	V50881	DOUBLE HOLE 1/2	531212	7.257	0.007	0.016
652478	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5085 Ring 1/8 5 B 9	Ring	V5085	1/8	530000	0.181	0	0
652480	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5085 Ring 1/4 5 B 9	Ring	V5085	1/4	530055	0.317	0	0.001
652482	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5085 Ring 3/8 5 B 9	Ring	V5085	3/8	530154	0.454	0	0.001

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
652484	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5085 Ring 1/2 5 B 9	Ring	V5085	1/2	530208	0.589	0.001	0.001
652488	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5086 Support sleeve 1/4 E 1 9	Support sleeve	V5086	1/4	561004	1.337	0.001	0.003
652492	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503625Sleeve 3/8 5 B 9	Sleeve	V503625	3/8	364025	0.816	0.001	0.002
652494	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503625Sleeve 1/2 5 B 9	Sleeve	V503625	1/2	364032	1.27	0.001	0.003
652496	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503624Nut 3/8 5 A 9	Nut	V503624	3/8	360027	11.022	0.011	0.024
652498	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503624Nut 1/2 5 A 9	Nut	V503624	1/2	360034	18.143	0.018	0.04
652516	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5084 Sealing 1/2ID 5 A 9	Sealing	V5084	1/2 ID	438207	1.723	0.002	0.004
652517	Pureflow Press (USA)	Pexcel Pureflow Accessory	V54052 Sealing santoprene bulk 5 2M9	Sealing	V54052	SANTOPRENE BULK	484211	0.817	0.001	0.002
652518	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50841 Sealing 1/2IDSANTOPRENE 5 2M9	Sealing	V50841	1/2 ID SANTOPRENE	437217	0.725	0.001	0.002
652520	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50841 Sealing 3/4IDSANTOPRENE 5 2M9	Sealing	V50841	3/4 ID SANTOPRENE	437408	1.179	0.001	0.003
652846	Pexcel Pureflow Zube	Pureflow Press (USA)	V54057 Package insert manabloc X Z 9	Package insert	V54057	MANABLOC	561325	1.134	0.001	0.003
652986	Pureflow Crimp (USA)	Pexel KS Fittings	V5058 Plug 3/8 5 A 9	Plug	V5058	3/8	437026	1.2	0.001	0.003
652990	Pureflow Crimp (USA)	Pexel KS Fittings	V5058 Plug 1/2 5 A 9	Plug	V5058	1/2	437231	2.041	0.002	0.004
652993	Pureflow Crimp (USA)	Pexel KS Fittings	V50582 Plug 1/2bulk 5 A 9	Plug	V50582	1/2 BULK	437163	1.818	0.002	0.004
652994	Pureflow Crimp (USA)	Pexel KS Fittings	V5058 Plug 3/4 5 A 9	Plug	V5058	3/4	437446	3.378	0.003	0.007
652997	Pureflow Crimp (USA)	Pexel KS Fittings	V50582 Plug 3/4bulk 5 A 9	Plug	V50582	3/4 BULK	437156	4.535	0.005	0.01
652998	Pureflow Crimp (USA)	Pexel KS Fittings	V5058 Plug 1 5 A 9	Plug	V5058	1	437651	6.985	0.007	0.015
653299	Pureflow Crimp (USA)	Pex Crimp Fittings	V5045ZLAdapter 1x1F 0 1 9	Adapter	V5045ZL	1 X 1 F	406558	49.215	0.049	0.109
653304	Pureflow Crimp (USA)	Pex Crimp Fittings	V5046ZLAdapter 1x1M 1 1 9	Adapter	V5046ZL	1 X 1 M	606514	46.72	0.047	0.103
653317	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50199 Ring 3/8 1 1 9	Ring	V50199	3/8	436005	4.945	0.005	0.011
653319	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50199 Ring 1/2 1 1 9	Ring	V50199	1/2	436203	5.9	0.006	0.013
653321	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50199 Ring 3/4 1 1 9	Ring	V50199	3/4	436401	8.029	0.008	0.018
653323	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50199 Ring 1 1 1 9	Ring	V50199	1	436609	9.98	0.01	0.022
653369	Pureflow Crimp (USA)	Pex Crimp Fittings	V5070 Elbow 3/8x1/2closed 1 1 9	Elbow	V5070	3/8 X 1/2 CLOSED	442082	112.4	0.112	0.248
653371	Pureflow Crimp (USA)	Pex Crimp Fittings	V50701 Elbow 3/8x8closed 1 1 9	Elbow	V50701	3/8 X 8 CLOSED	442099	138.346	0.138	0.305
653381	Pureflow Crimp (USA)	Pex Crimp Fittings	V5021 Elbow 1/2x1/2 1 1 9	Elbow	V5021	1/2 X 1/2	443256	21.954	0.022	0.048
653384	Pureflow Crimp (USA)	Pex Crimp Fittings	V5020 Elbow 1/2x1/2 1 1 9	Elbow	V5020	1/2 X 1/2	443201	20.545	0.021	0.045
653386	Pureflow Crimp (USA)	Pex Crimp Fittings	V5070 Elbow 1/2x1/2closed 1 1 9	Elbow	V5070	1/2 X 1/2 CLOSED	442280	119.385	0.119	0.263
653388	Pureflow Crimp (USA)	Pex Crimp Fittings	V5070 Elbow 1/2x1/26incl 1 1 9	Elbow	V5070	1/2 X 1/2 6 IN CL	442266	98.066	0.098	0.216
653390	Pureflow Crimp (USA)	Pex Crimp Fittings	V50701 Elbow 1/2x6inclosed 1 1 9	Elbow	V50701	1/2 X 6 IN CLOSED	442273	118.387	0.118	0.261
653392	Pureflow Crimp (USA)	Pex Crimp Fittings	V50701 Elbow 1/2x81/2closed 1 1 9	Elbow	V50701	1/2 X 8 1/2 CLOSED	442297	140	0.14	0.309
653407	Pureflow Crimp (USA)	Pex Crimp Fittings	V5021 Elbow 3/4x3/4 1 1 9	Elbow	V5021	3/4 X 3/4	443454	50.167	0.05	0.111
653410	Pureflow Crimp (USA)	Pex Crimp Fittings	V5020 Elbow 3/4x3/4 1 1 9	Elbow	V5020	3/4 X 3/4	443409	42.637	0.043	0.094
653412	Pureflow Crimp (USA)	Pex Crimp Fittings	V5070 Elbow 3/4x3/4closed 1 1 9	Elbow	V5070	3/4 X 3/4 CLOSED	442402	213	0.213	0.47
653691	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 1/2x1/2 5 399	Coupling	V5215	1/2 X 1/2	434032	2.948	0.003	0.006

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653693	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 1/2x1/2bulk 5 399	Coupling	V5215	1/2 X 1/2 BULK	430331	2.85	0.003	0.006
653696	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/4x1/2 5 399	Coupling	V5215	3/4 X 1/2	433431	4.49	0.004	0.01
653698	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/4x3/4 5 399	Coupling	V5215	3/4 X 3/4	434049	5.44	0.005	0.012
653700	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 1x1/2 5 399	Coupling	V5215	1 X 1/2	433530	8.845	0.009	0.019
653702	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 1x3/4 5 399	Coupling	V5215	1 X 3/4	433547	9.455	0.009	0.021
653704	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 1x1 5 399	Coupling	V5215	1 X 1	433554	10.682	0.011	0.024
653709	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 1/2x1/2 5 399	Elbow	V5216	1/2 X 1/2	432205	4.545	0.005	0.01
653711	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 1/2x1/2bulk 5 399	Elbow	V5216	1/2 X 1/2 BULK	430225	4.545	0.005	0.01
653712	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 3/4x1/2 5 399	Elbow	V5216	3/4 X 1/2	432427	7.257	0.007	0.016
653714	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 3/4x3/4 5 399	Elbow	V5216	3/4 X 3/4	432403	9.53	0.01	0.021
653716	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 3/4x3/4bulk 5 399	Elbow	V5216	3/4 X 3/4 BULK	430454	9.07	0.009	0.02
653717	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 1x1 5 399	Elbow	V5216	1 X 1	432601	21.091	0.021	0.046
653735	Pureflow Crimp (USA)	Pexel KS Fittings	V5263 Union 3/8x1/2 5 399	Union	V5263	3/8 X 1/2	433233	11.339	0.011	0.025
653736	Pureflow Crimp (USA)	Pexel KS Fittings	V5263 Union 1/2x1/2 5 399	Union	V5263	1/2 X 1/2	433332	11.34	0.011	0.025
653738	Pureflow Crimp (USA)	Pexel KS Fittings	V52631 Union 1/2x1/2bulk 5 399	Union	V52631	1/2 X 1/2 BULK	431345	13.64	0.014	0.03
653739	Pureflow Crimp (USA)	Pexel KS Fittings	V5263 Union 3/4x3/4 5 399	Union	V5263	3/4 X 3/4	433448	20.411	0.02	0.045
653742	Pureflow Crimp (USA)	Pexel KS Fittings	V5255 Union 1/2x1/2 5 399	Union	V5255	1/2 X 1/2	432335	13.109	0.013	0.029
653747	Pureflow Crimp (USA)	Pexel KS Fittings	V5255 Union 3/4x3/4 5 399	Union	V5255	3/4 X 3/4	432441	23.859	0.024	0.053
653749	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1/2x1/2x1/2 5 399	Tee	V5218	1/2 X 1/2 X 1/2	435206	6.35	0.006	0.014
653751	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1/2x1/2x1/2bulk 5 399	Tee	V5218	1/2X1/2X1/2 BULK	435015	6.396	0.006	0.014
653752	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1/2x1/2x3/4 5 399	Tee	V5218	1/2 X 1/2 X 3/4	433349	8.618	0.009	0.019
653754	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x1/2x1/2 5 399	Tee	V5218	3/4 X 1/2 X 1/2	434339	9.727	0.01	0.021
653756	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x1/2x1/2bulk 5 399	Tee	V5218	3/4X1/2X1/2 BULK	435039	9.07	0.009	0.02
653757	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x1/2x3/4 5 399	Tee	V5218	3/4 X 1/2 X 3/4	434346	11.612	0.012	0.026
653759	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x1/2x3/4bulk 5 399	Tee	V5218	3/4X1/2X3/4 BULK	435046	11.339	0.011	0.025
653760	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x3/4x1/2 5 399	Tee	V5218	3/4 X 3/4 X 1/2	434438	10.432	0.01	0.023
653762	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x3/4x1/2bulk 5 399	Tee	V5218	3/4X3/4X1/2 BULK	435053	10.387	0.01	0.023
653763	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x3/4x3/4 5 399	Tee	V5218	3/4 X 3/4 X 3/4	435404	13	0.013	0.029
653765	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x3/4x3/4bulk 5 399	Tee	V5218	3/4X3/4X3/4 BULK	435060	12.541	0.013	0.028
653766	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/4x3/4x1bulk 5 399	Tee	V5218	3/4X3/4X1 BULK	434452	17.236	0.017	0.038
653768	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1x3/4x3/4 5 399	Tee	V5218	1 X 3/4 X 3/4	435442	21.136	0.021	0.047
653770	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1x3/4x1 5 399	Tee	V5218	1 X 3/4 X 1	435459	24.721	0.025	0.055
653772	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1x1x1/2 5 399	Tee	V5218	1 X 1 X 1/2	435534	19.5	0.02	0.043
653774	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1x1x3/4 5 399	Tee	V5218	1 X 1 X 3/4	435541	21	0.021	0.046
653776	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 1x1x1 5 399	Tee	V5218	1 X 1 X 1	435602	22.7	0.023	0.05
655001	ManaBloc (USA)	Pexfit-Manifold	V5338 Manifold - 5 Z 9	Manifold	V5338	-	507002	4763	4.763	10.501
655051	Pureflow Crimp (USA)	Pexel KS Fittings	V50391 Adapter 3/8x1/2 5 A 9	Adapter	V50391	3/8 X 1/2	500232	18.143	0.018	0.04
655061	Pureflow Crimp (USA)	Pexel KS Fittings	V50391 Adapter 1/2x1/2 5 A 9	Adapter	V50391	1/2 X 1/2	501338	18.143	0.018	0.04
656670	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5042 Plate Universalface 5 A 9	Plate	V5042	UNIVERSAL FACE	511122	36.28	0.036	0.08
656703	Pureflow Crimp (USA)	Pex Crimp Fittings	V5075ZLAdapter 3/8x1/2FPT 0 1 9	Adapter	V5075ZL	3/8 X 1/2 FPT	460239	26.761	0.027	0.059
656704	Pureflow Crimp (USA)	Pex Crimp Fittings	V5075ZLAdapter 1/2x1/2FPT 0 1 9	Adapter	V5075ZL	1/2 X 1/2 FPT	460338	26.308	0.026	0.058
656721	Pureflow Crimp (USA)	Pex Crimp Fittings	V5077ZLAdapter 3/8x3/8 1 1 9	Adapter	V5077ZL	3/8 X 3/8	460321	54.432	0.054	0.12
656722	Pureflow Crimp (USA)	Pex Crimp Fittings	V5077ZLAdapter 3/8x1/2 1 1 9	Adapter	V5077ZL	3/8 X 1/2	463315	52.163	0.052	0.115
656724	Pureflow Crimp (USA)	Pex Crimp Fittings	V5048ZLConnection piece 3/4x3/4FPT-18 1 1 9	Connection piece	V5048ZL	3/4 X 3/4 FPT - 18	467641	251.199	0.251	0.554
656725	Pureflow Crimp (USA)	Pex Crimp Fittings	V5032ZLAdapter 3/4xMBSUPPLYCONNE 0 Z 9	Adapter	V5032ZL	3/4 XMBSUPPLYCONNE	463469	179.091	0.179	0.395
656726	Pureflow Crimp (USA)	Pex Crimp Fittings	V5033ZLAdapter 3/4MPTxMANABLOCS.C 0 Z 9	Adapter	V5033ZL	3/4MPTXMANABLOCS.C	466460	149.2	0.149	0.329

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
656727	Pureflow Crimp (USA)	Pex Crimp Fittings	V5033ZLAdapter 1MPTxMAN.SUPPLYCON 0 Z 9	Adapter	V5033ZL	1MPTXMAN.SUPPLYCON	466569	180.909	0.181	0.399
656730	Pureflow Crimp (USA)	Pex Crimp Fittings	V5072ZLAdapter 3/8 0 1 9	Adapter	V5072ZL	3/8	462233	38.555	0.039	0.085
656731	Pureflow Crimp (USA)	Pex Crimp Fittings	V5072ZLAdapter 1/2 0 1 9	Adapter	V5072ZL	1/2	462349	38.555	0.039	0.085
656732	Pureflow Crimp (USA)	Pex Crimp Fittings	V5034ZLAdapter 3/4CRIMPXMBSUPPLYC 0 Z 9	Adapter	V5034ZL	3/4CRIMPXMBSUPPLYC	464145	89.81	0.09	0.198
656733	Pureflow Crimp (USA)	Pex Crimp Fittings	V5034ZLAdapter 1PCRIMPXMBSUPPLYCO 0 Z 9	Adapter	V5034ZL	1PCRIMPXMBSUPPLYCO	464169	93.44	0.093	0.206
656901	ManaBloc (USA)	Pexfit-Manifold	V50305 Manifold 1/2x26 5 Z 9	Manifold	V50305	1/2 X 26	412634	3540	3.54	7.804
658032	Pureflow Crimp (USA)	Poly PEX Press	V5626 Elbow 45°11/2 5 A 9	Elbow 45°	V5626	1 1/2	492858	106.594	0.107	0.235
658042	Pureflow Crimp (USA)	Poly PEX Press	V5626 Elbow 45°2 5 A 9	Elbow 45°	V5626	2	492865	136.077	0.136	0.3
658053	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50410 Brackets-Set 1/2-1 7 0 9	Brackets-Set	V50410	1/2 - 1	457505	74	0.074	0.163
658054	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50411 Isolator 1/2 5 K 9	Isolator	V50411	1/2	457604	9.072	0.009	0.02
658055	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50412 Clamp 1/2 5 DZ9	Clamp	V50412	1/2	457703	27.216	0.027	0.06
658057	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50414 Bracket 15-25 7 0 9	Bracket	V50414	15-25	457901	235	0.235	0.518
658085	Pureflow Press (USA)	Pexcel Pureflow Accessory	V95004 Valve MANABLOCreplacem. 5 K 9	Valve	V95004	MANABLOC REPLACEM.	506043	9.842	0.01	0.022
658086	Pureflow Press (USA)	Pexcel Pureflow Accessory	V95004 Valve MANABLOCreplacem. 5 L 9	Valve	V95004	MANABLOC REPLACEM.	506036	9.842	0.01	0.022
658087	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50396 Valve body KITF.MANABLOCR/5 Z 9	Valve body	V50396	KIT F.MANABLOC R/B	506029	65.77	0.066	0.145
658315	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5089 Nut 1/2 5 A 9	Nut	V5089	1/2	337050	7.711	0.008	0.017
658316	Pureflow Press (USA)	Pexcel Pureflow Accessory	V50891 Nut 3/4 5 A 9	Nut	V50891	3/4	530178	10.433	0.01	0.023
658439	Pureflow Press (USA)	Pexcel Pureflow Accessory	V95005 valve spindle 1/4Kit 5 Z 9	valve spindle	287091	1/4 KIT	516028	68.182	0.068	0.15
658681	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 1/2x3/4 0 1 9	Adapter	V5011ZL	1/2 X 3/4	463247	63.775	0.064	0.141
658682	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 3/4x1/2 0 1 9	Adapter	V5011ZL	3/4 X 1/2	463421	43.454	0.043	0.096
658683	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 3/4x1 0 1 9	Adapter	V5011ZL	3/4 X 1	464466	97.976	0.098	0.216
658684	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 1x3/4 0 1 9	Adapter	V5011ZL	1 X 3/4	463612	70.307	0.07	0.155
658685	Pureflow Crimp (USA)	Pex Crimp Fittings	V5014ZLElbow 1/2x3/8 0 1 9	Elbow	V5014ZL	1/2 X 3/8	462325	63.503	0.064	0.14
658687	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 1/2x3/4 0 1 9	Adapter	V5012ZL	1/2 X 3/4	463346	64.682	0.065	0.143
658688	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 3/4x1 0 1 9	Adapter	V5012ZL	3/4 X 1	463452	105.007	0.105	0.232
658689	Pureflow Crimp (USA)	Pex Crimp Fittings	V5017ZLCoupling 3/8X3/8 0 1 9	Coupling	V5017ZL	3/8 X 3/8	466200	10.523	0.011	0.023
658691	Pureflow Crimp (USA)	Pex Crimp Fittings	V5017ZLCoupling 1/2x1/2 0 1 9	Coupling	V5017ZL	1/2 X 1/2	466309	13.971	0.014	0.031
658692	Pureflow Crimp (USA)	Pex Crimp Fittings	V5017ZLCoupling 3/4x3/4 0 1 9	Coupling	V5017ZL	3/4 X 3/4	466415	25.401	0.025	0.056
658693	Pureflow Crimp (USA)	Pex Crimp Fittings	V5017ZLCoupling 1x1 0 1 9	Coupling	V5017ZL	1 X 1	466507	37.875	0.038	0.084
658694	Pureflow Crimp (USA)	Pex Crimp Fittings	V5016ZLElbow coupling 1/2x3/4 0 1 9	Elbow coupling	V5016ZL	1/2 X 3/4	462431	36.289	0.036	0.08
658695	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1/2x1/2x3/4 0 1 9	Tee	V5018ZL	1/2 X 1/2 X 3/4	465241	46.539	0.047	0.103
658696	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/4x1/2x3/4 0 1 9	Tee	V5018ZL	3/4 X 1/2 X 3/4	464350	45.722	0.046	0.101
658697	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/4x3/4x1/2 0 1 9	Tee	V5018ZL	3/4 X 3/4 X 1/2	464435	46.266	0.046	0.102
658698	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/4x3/4x1 0 1 9	Tee	V5018ZL	3/4 X 3/4 X 1	464459	89.131	0.089	0.197
658699	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1x3/4x3/4 0 1 9	Tee	V5018ZL	1 X 3/4 X 3/4	465449	81.193	0.081	0.179
658701	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1x3/4x1 0 1 9	Tee	V5018ZL	1 X 3/4 X 1	465456	74.389	0.074	0.164
658702	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1x1x1/2 0 1 9	Tee	V5018ZL	1 X 1 X 1/2	465531	73.028	0.073	0.161

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
658703	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1x1x3/4 0 1 9	Tee	V5018ZL	1 X 1 X 3/4	465548	73.255	0.073	0.161
658792	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 3/8 5 A 9	Coupling	V5615	3/8	494029	9.797	0.01	0.022
658802	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1/2 5 A 9	Coupling	V5615	1/2	494036	12.25	0.012	0.027
658812	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 3/4 5 A 9	Coupling	V5615	3/4	494043	18.143	0.018	0.04
658822	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1 5 A 9	Coupling	V5615	1	494050	30.844	0.031	0.068
658832	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 11/4 5 A 9	Coupling	V5615	1 1/4	494074	68.492	0.068	0.151
658842	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 11/2 5 A 9	Coupling	V5615	1 1/2	494081	86.409	0.086	0.19
658852	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1/2x3/8 5 A 9	Coupling	V5615	1/2 X 3/8	493428	10.976	0.011	0.024
658862	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1/2x3/4 5 A 9	Coupling	V5615	1/2 X 3/4	493435	15.422	0.015	0.034
658872	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 3/4x1 5 A 9	Coupling	V5615	3/4 X 1	493541	24.947	0.025	0.055
658882	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 3/4x11/4 5 A 9	Coupling	V5615	3/4 X 1 1/4	493473	45.812	0.046	0.101
658892	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1x11/4 5 A 9	Coupling	V5615	1 X 1 1/4	493572	50.802	0.051	0.112
658902	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 3/4x11/2 5 A 9	Coupling	V5615	3/4 X 1 1/2	493480	53.572	0.054	0.118
658912	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 1x11/2 5 A 9	Coupling	V5615	1 X 1 1/2	493589	60.554	0.061	0.133
658922	Pureflow Crimp (USA)	Poly PEX Press	V5615 Coupling 11/4x11/2 5 A 9	Coupling	V5615	1 1/4 X 1 1/2	493787	74.91	0.075	0.165
658932	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 1/2 5 A 9	Elbow	V5616	1/2	492209	13.154	0.013	0.029
658942	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 3/4 5 A 9	Elbow	V5616	3/4	492407	21.5	0.022	0.047
658952	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 1 5 A 9	Elbow	V5616	1	492605	36.287	0.036	0.08
658962	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 11/4 5 A 9	Elbow	V5616	1 1/4	492704	77.564	0.078	0.171
658972	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 11/2 5 A 9	Elbow	V5616	1 1/2	492803	99.88	0.1	0.22
658982	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1/2 5 A 9	Tee	V5618	1/2	495200	19.05	0.019	0.042
658992	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 3/4 5 A 9	Tee	V5618	3/4	495408	30.844	0.031	0.068
659002	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1 5 A 9	Tee	V5618	1	495606	52.163	0.052	0.115
659012	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/4 5 A 9	Tee	V5618	1 1/4	495705	113.398	0.113	0.25
659022	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2 5 A 9	Tee	V5618	1 1/2	495804	148.004	0.148	0.326
659032	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1/2x3/8x3/8 5 A 9	Tee	V5618	1/2 X 3/8 X 3/8	493220	16.51	0.017	0.036
659042	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1/2x1/2x3/8 5 A 9	Tee	V5618	1/2 X 1/2 X 3/8	493329	17.78	0.018	0.039
659052	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1/2x1/2x3/4 5 A 9	Tee	V5618	1/2 X 1/2 X 3/4	493343	23.586	0.024	0.052
659062	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 3/4x1/2x1/2 5 A 9	Tee	V5618	3/4 X 1/2 X 1/2	494333	23.586	0.024	0.052
659072	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 3/4x1/2x3/4 5 A 9	Tee	V5618	3/4 X 1/2 X 3/4	494340	27.669	0.028	0.061
659082	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 3/4x3/4x1/2 5 A 9	Tee	V5618	3/4 X 3/4 X 1/2	494432	26.58	0.027	0.059
659092	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x1/2x1/2 5 A 9	Tee	V5618	1 X 1/2 X 1/2	495330	30.844	0.031	0.068
659102	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x3/4x1/2 5 A 9	Tee	V5618	1 X 3/4 X 1/2	495439	33.565	0.034	0.074
659112	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x1/2x1 5 A 9	Tee	V5618	1 X 1/2 X 1	495354	43.885	0.044	0.097
659122	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x1x1/2 5 A 9	Tee	V5618	1 X 1 X 1/2	495538	39.916	0.04	0.088
659132	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x3/4x3/4 5 A 9	Tee	V5618	1 X 3/4 X 3/4	495446	38.101	0.038	0.084
659142	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x3/4x1 5 A 9	Tee	V5618	1 X 3/4 X 1	495453	47.173	0.047	0.104
659152	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 1x1x3/4 5 A 9	Tee	V5618	1 X 1 X 3/4	495545	46.27	0.046	0.102
659162	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/4x11/4x3/4 5 A 9	Tee	V5618	11/4 X 11/4 X 3/4	497747	82.628	0.083	0.182
659172	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/4x11/4x1 5 A 9	Tee	V5618	11/4 X 11/4 X 1	497754	93.53	0.094	0.206
659182	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/4x1x3/4 5 A 9	Tee	V5618	11/4 X 1 X 3/4	497549	68.038	0.068	0.15
659192	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/4x1x1 5 A 9	Tee	V5618	11/4 X 1 X 1	497556	75.522	0.076	0.166
659202	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x11/2x3/4 5 A 9	Tee	V5618	11/2 X 11/2 X 3/4	498843	105.782	0.106	0.233
659212	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x11/2x1 5 A 9	Tee	V5618	11/2 X 11/2 X 1	498850	111.23	0.111	0.245
659222	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x11/2x11/4 5 A 9	Tee	V5618	11/2 X 11/2 X 11/4	498874	131.66	0.132	0.29
659232	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x1x3/4 5 A 9	Tee	V5618	11/2 X 1 X 3/4	498546	77.18	0.077	0.17
659242	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x1x1 5 A 9	Tee	V5618	11/2 X 1 X 1	498553	88.26	0.088	0.195
659252	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 3/8 5 A 9	Plug	V5656	3/8	497228	5.17	0.005	0.011
659262	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 1/2 5 A 9	Plug	V5656	1/2	497235	6.8	0.007	0.015
659272	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 3/4 5 A 9	Plug	V5656	3/4	497440	10.069	0.01	0.022

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
659282	Pureflow Crimp (USA)	Poly PEX Press	V5656 Plug 1 5 A 9	Plug	V5656	1	497655	17.236	0.017	0.038
659292	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 3/4x1/2-2 5 A 9	Manifold	V5636	3/4 X 1/2 - 2	491523	91.852	0.092	0.202
659302	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 3/4x1/2-3 5 A 9	Manifold	V5636	3/4 X 1/2 - 3	491530	115.666	0.116	0.255
659312	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 3/4x1/2-4 5 A 9	Manifold	V5636	3/4 X 1/2 - 4	490540	144.242	0.144	0.318
659322	Pureflow Crimp (USA)	Poly PEX Press	V56361 Manifold 3/4x1/2-4 5 A 9	Manifold	V56361	3/4 X 1/2 - 4	490045	136.077	0.136	0.3
659332	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 1x3/4x1/2-4 5 A 9	Manifold	V5636	1 X 3/4 X 1/2 - 4	492544	149.685	0.15	0.33
659342	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 1x1/2-6 5 A 9	Manifold	V5636	1 X 1/2 - 6	492568	206.384	0.206	0.455
659352	Pureflow Crimp (USA)	Poly PEX Press	V56361 Manifold 1x1/2-6 5 A 9	Manifold	V56361	1 X 1/2 - 6	492063	194.137	0.194	0.428
659354	Pureflow Crimp (USA)	Poly PEX Press	V56361 Manifold 1x1/2-8 5 A 9	Manifold	V56361	1 X 1/2 - 8	492087	249	0.249	0.549
659362	Pureflow Crimp (USA)	Poly PEX Press	V5636 Manifold 1x1/2-8 5 A 9	Manifold	V5636	1 X 1/2 - 8	492582	261.269	0.261	0.576
659372	Pureflow Crimp (USA)	Poly PEX Press	V56131 Adapter 3/8x1/2 5 A 9	Adapter	V56131	3/8 X 1/2	492247	21.318	0.021	0.047
659382	Pureflow Crimp (USA)	Poly PEX Press	V56131 Adapter 1/2x1/2 5 A 9	Adapter	V56131	1/2 X 1/2	492346	22.679	0.023	0.05
659392	Pureflow Crimp (USA)	Poly PEX Press	V56132 Adapter 3/4x1 5 A 9	Adapter	V56132	3/4 X 1	494142	44.452	0.044	0.098
659402	Pureflow Crimp (USA)	Poly PEX Press	V56132 Adapter 1x1 5 A 9	Adapter	V56132	1 X 1	494166	53.523	0.054	0.118
659412	Pureflow Crimp (USA)	Poly PEX Press	V56133 Adapter 3/8x1/2 5 A 9	Adapter	V56133	3/8 X 1/2	493244	22.679	0.023	0.05
659422	Pureflow Crimp (USA)	Poly PEX Press	V56133 Adapter 1/2x1/2 5 A 9	Adapter	V56133	1/2 X 1/2	493336	24.947	0.025	0.055
659432	Pureflow Crimp (USA)	Poly PEX Press	V56133 Adapter 3/4x3/4 5 A 9	Adapter	V56133	3/4 X 3/4	493442	36.287	0.036	0.08
659442	Pureflow Crimp (USA)	Poly PEX Press	V56134 Adapter 3/8 5 A 9	Adapter	V56134	3/8	492230	27.215	0.027	0.06
659452	Pureflow Crimp (USA)	Poly PEX Press	V56134 Adapter 1/2 5 A 9	Adapter	V56134	1/2	492339	28.349	0.028	0.062
659462	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/8x3/8 5 399	Coupling	V5215	3/8 X 3/8	434025	1.81	0.002	0.004
659472	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/8x1/2 5 399	Coupling	V5215	3/8 X 1/2	433325	2.54	0.003	0.006
659482	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 3/8x3/8 5 399	Elbow	V5216	3/8 X 3/8	432106	3.18	0.003	0.007
659492	Pureflow Crimp (USA)	Pexel KS Fittings	V5257 Überwurfm. 3/8 5 399	Cap nut	V5257	3/8	433004	16.12	0.016	0.036
659502	Pureflow Crimp (USA)	Pexel KS Fittings	V5257 Überwurfm. 1/2 5 399	Cap nut	V5257	1/2	433202	18.143	0.018	0.04
659512	Pureflow Crimp (USA)	Pexel KS Fittings	V5255 Union 3/8x1/2 5 399	Union	V5255	3/8 X 1/2	432328	12.25	0.012	0.027
659532	Pureflow Crimp (USA)	Pex Crimp Fittings	V50735 Housing 1/2 5 B 9	Housing	V50735	1/2	437200	737.087	0.737	1.625
659541	Pureflow Crimp (USA)	Pexel KS Fittings	V50392 Adapter 1/2 5 A 9	Adapter	V50392	1/2	502601	18.675	0.019	0.041
659542	Pureflow Crimp (USA)	Pex Crimp Fittings	V5073 Housing 3/8 5 B 9	Housing	V5073	3/8	437002	396.893	0.397	0.875
659545	Pureflow Crimp (USA)	Pexel KS Fittings	V50392 Adapter 3/8 5 A 9	Adapter	V50392	3/8	502618	18.613	0.019	0.041
659547	Pureflow Crimp (USA)	Poly PEX Press	V56135 Adapter 1/2 5 A 9	Adapter	V56135	1/2	502625	23.171	0.023	0.051
659549	Pureflow Crimp (USA)	Poly PEX Press	V56135 Adapter 3/8 5 A 9	Adapter	V56135	3/8	502632	22.178	0.022	0.049
659551	Pureflow Crimp (USA)	Pexel KS Fittings	V56137 Adapter 1/2 5 A 9	Adapter	V56137	1/2	502649	18.837	0.019	0.042
659552	Pureflow Crimp (USA)	Pex Crimp Fittings	V5073 Housing 1/2 5 B 9	Housing	V5073	1/2	437224	399.161	0.399	0.88
659555	Pureflow Crimp (USA)	Pexel KS Fittings	V56137 Adapter 3/8 5 A 9	Adapter	V56137	3/8	502656	18.776	0.019	0.041
659557	Pureflow Crimp (USA)	Pexel KS Fittings	V56138 Adapter 1/2 5 A 9	Adapter	V56138	1/2	502663	39.463	0.039	0.087
659559	Pureflow Crimp (USA)	Pexel KS Fittings	V56138 Adapter 3/8 5 A 9	Adapter	V56138	3/8	502670	42.033	0.042	0.093
659561	Pureflow Crimp (USA)	Pexel KS Fittings	V50391 Adapter 1/2x3/8MB 5 A 9	Adapter	V50391	1/2 X 3/8 MB	511238	11.79	0.012	0.026
659571	Pureflow Crimp (USA)	Pexel KS Fittings	V50391 Adapter 3/8x3/8 5 A 9	Adapter	V50391	3/8 X 3/8	511337	11.702	0.012	0.026
659575	Pureflow Crimp (USA)	Pexel KS Fittings	V5035ZLAdapter 3/4 0 1 9	Adapter	V5035ZL	3/4	502687	16.442	0.016	0.036
659577	Pureflow Crimp (USA)	Pexel KS Fittings	V5035ZLAdapter 1 0 1 9	Adapter	V5035ZL	1	502694	16.442	0.016	0.036
660021	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5087 Cap MANABLOC3/8 5 A 9	Cap	V5087	MANABLOC 3/8	362045	9.071	0.009	0.02
660022	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5087 Cap MANABLOC1/2 5 A 9	Cap	V5087	MANABLOC 1/2	362052	17.009	0.017	0.037
660332	Pureflow Crimp (USA)	Poly PEX Press	V5616 Elbow 3/8 5 A 9	Elbow	V5616	3/8	492100	10.432	0.01	0.023
699461	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 3/8 5 A 9	Tee	V5618	3/8	492001	15.875	0.016	0.035
699721	Pureflow Crimp (USA)	Poly PEX Press	V5641ZLTee 1x1/2FNPTx1/2FNPT 5 1 9	Tee	V5641ZL	1X1/2FNPTX1/2FNPT	491103	140.159	0.14	0.309
699731	Pureflow Crimp (USA)	Poly PEX Press	V5642ZLTee 3/4Px3/4PEx1/2FNPT 5 1 9	Tee	V5642ZL	3/4PX3/4PEX1/2FNPT	491202	227.703	0.228	0.502

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
699741	Pureflow Crimp (USA)	Poly PEX Press	V5642ZLTee 1Px3/4Px1/2FNPT 5 1 9	Tee	V5642ZL	1PX3/4P X 1/2 FNPT	491301	203	0.203	0.448
699751	Pureflow Crimp (USA)	Poly PEX Press	V5642ZLTee 1Px1Px1/2FNPT 5 1 9	Tee	V5642ZL	1P X 1P X 1/2 FNPT	491400	239.496	0.239	0.528
730403	ManaBloc (USA)	Pexfit-Manifold	V50406 Manifold 1/2x14 5 Z 9	Manifold	V50406	1/2 X 14	496108	2279.534	2.28	5.026
730413	ManaBloc (USA)	Pexfit-Manifold	V50406 Manifold 1/2x18 5 Z 9	Manifold	V50406	1/2 X 18	496153	2639.931	2.64	5.82
730423	ManaBloc (USA)	Pexfit-Manifold	V50406 Manifold 1/2x24 5 Z 9	Manifold	V50406	1/2 X 24	496207	3636.9	3.637	8.018
730433	ManaBloc (USA)	Pexfit-Manifold	V50406 Manifold 1/2x30 5 Z 9	Manifold	V50406	1/2 X 30	496252	4346.32	4.346	9.582
730443	ManaBloc (USA)	Pexfit-Manifold	V50406 Manifold 1/2x36 5 Z 9	Manifold	V50406	1/2 X 36	496306	4979.08	4.979	10.977
730453	ManaBloc (USA)	Pexfit-Manifold	V50400 Manifold 1/2x24 5 Z 9	Manifold	V50400	1/2 X 24	496351	3636.9	3.637	8.018
730463	ManaBloc (USA)	Pexfit-Manifold	V50400 Manifold 1/2x30 5 Z 9	Manifold	V50400	1/2 X 30	496405	4346.32	4.346	9.582
730473	ManaBloc (USA)	Pexfit-Manifold	V50400 Manifold 1/2x36 5 Z 9	Manifold	V50400	1/2 X 36	496450	4979.08	4.979	10.977
740972	Pureflow Crimp (USA)	Pexel KS Fittings	V5216 Elbow 3/4x1/2bulk 5 399	Elbow	V5216	3/4 X 1/2 BULK	430423	7.03	0.007	0.015
740973	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/4x1/2bulk 5 399	Coupling	V5215	3/4 X 1/2 BULK	430430	4.354	0.004	0.01
740974	Pureflow Crimp (USA)	Pexel KS Fittings	V5215 Coupling 3/4bulk 5 399	Coupling	V5215	3/4 BULK	430447	5.352	0.005	0.012
740978	Pureflow Crimp (USA)	Pexel KS Fittings	V5263 Union 1/2x1/2bulk 5 399	Union	V5263	1/2 X 1/2 BULK	431338	13.26	0.013	0.029
740979	Pureflow Crimp (USA)	Pexel KS Fittings	V5263 Union 3/4x3/4bulk 5 399	Union	V5263	3/4 X 3/4 BULK	431444	11.38	0.011	0.025
740980	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5087 Cap MPortSafety3/8bulk 5 A 9	Cap	V5087	MPORTSAFETY3/8BULK	432038	10.6	0.011	0.023
740981	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5087 Cap MAPortSafet1/2bulk 5 A 9	Cap	V5087	MAPORTSAFET1/2BULK	432045	16.556	0.017	0.036
740984	Pureflow Press (USA)	Pexcel Pureflow Accessory	V54059 Nut 1/2FEM.SWIVELbulk 5 B 9	Nut	V54059	1/2FEM.SWIVELBULK	432229	11.203	0.011	0.025
740986	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5285 Drainage valve 1/2-6bulk 5 399	Drainage valve	V5285	1/2 - 6 BULK	433066	45.36	0.045	0.1
740987	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5285 Drainage valve 1/2-14bulk 5 B 9	Drainage valve	V5285	1/2 - 14 BULK	433141	77.11	0.077	0.17
740988	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5285 Drainage valve 1/2bulk 5 399	Drainage valve	V5285	1/2 BULK	433301	9.797	0.01	0.022
740996	Pureflow Crimp (USA)	Pexel KS Fittings	V52181 Tee 1/2bulk 5 399	Tee	V52181	1/2 BULK	435145	10.85	0.011	0.024
740997	Pureflow Crimp (USA)	Pexel KS Fittings	V54029 Adapter 1/2Mbulk 5 399	Adapter	V54029	1/2 M BULK	435213	7.52	0.008	0.017
740998	Pureflow Crimp (USA)	Pexel KS Fittings	V52551 Union 1/2x1/2bulk 5 399	Union	V52551	1/2 X 1/2 BULK	435237	12.836	0.013	0.028
740999	Pureflow Crimp (USA)	Pexel KS Fittings	V5255 Union 1/2x1/2bulk 5 399	Union	V5255	1/2 X 1/2 BULK	435336	13.063	0.013	0.029
741005	Pureflow Crimp (USA)	Pexel KS Fittings	V54029 Elbow MPT-1/2x1/2bulk 5 399	Elbow	V54029	MPT-1/2 X 1/2 BULK	438337	9.5	0.01	0.021
741007	Pureflow Crimp (USA)	Pexel KS Fittings	V54029 Elbow 3/4x3/4bulk 5 399	Elbow	V54029	3/4 X 3/4 BULK	438443	13.756	0.014	0.03
741009	Pureflow Press (USA)	Pexcel Pureflow Accessory	V54059 Plug 1/2bulk 5 A 9	Plug	V54059	1/2 BULK	439303	6.27	0.006	0.014
741011	Pureflow Press (USA)	Pexcel Pureflow Accessory	V54059 Plug 3/4bulk 5 A 9	Plug	V54059	3/4 BULK	439402	7.655	0.008	0.017
741012	Pureflow Crimp (USA)	Pexel KS Fittings	V95003 Adapter 3/4BARBX3/4bulk 5 399	Adapter	V95003	3/4 BARB X 3/4BULK	439433	10.079	0.01	0.022
741014	Pureflow Crimp (USA)	Pexel KS Fittings	V52151 Elbow 1/2MPTX3/8M-VGbulk 5 399	Elbow	V52151	1/2MPTX3/8M-VGBULK	439525	9.806	0.01	0.022
741015	Pureflow Crimp (USA)	Pexel KS Fittings	V52151 Coupling 1/2MPT-VGPEXFIbulk 5 399	Coupling	V52151	1/2MPT-VGPEXFIBULK	439532	10.215	0.01	0.023
741016	Pureflow Crimp (USA)	Pexel KS Fittings	V52161 Elbow 1/2MPT-VGPEXFIbulk 5 399	Elbow	V52161	1/2MPT-VGPEXFIBULK	439631	11.38	0.011	0.025
741017	Pureflow Crimp (USA)	Pexel KS Fittings	V52182 Tee 1/2MPT-VGPEXFIbulk 5 399	Tee	V52182	1/2MPT-VGPEXFIBULK	439662	15.799	0.016	0.035
741052	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 3/8x3/8 0 1 9	Coupling	V5015ZL	3/8 X 3/8	464220	9.253	0.009	0.02

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
741054	Pureflow Crimp (USA)	Pex Crimp Fittings	V5024ZLAdapter 3/8x1/2M 0 1 9	Adapter	V5024ZL	3/8 X 1/2 M	466224	16.148	0.016	0.036
741055	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 1/2x3/8 0 1 9	Coupling	V5015ZL	1/2 X 3/8	464329	11.385	0.011	0.025
741057	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 1/2x1/2 0 1 9	Coupling	V5015ZL	1/2 X 1/2	464343	11.838	0.012	0.026
741058	Pureflow Crimp (USA)	Pex Crimp Fittings	V5045ZLAdapter 1/2x1/2F 0 1 9	Adapter	V5045ZL	1/2 X 1/2 F	466354	15.921	0.016	0.035
741059	Pureflow Crimp (USA)	Pex Crimp Fittings	V5046ZLAdapter 1/2x1/2M 0 1 9	Adapter	V5046ZL	1/2 X 1/2 M	466330	17.146	0.017	0.038
741060	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 3/4x1/2 0 1 9	Coupling	V5015ZL	3/4 X 1/2	464411	19.958	0.02	0.044
741061	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 3/4x3/4 0 1 9	Coupling	V5015ZL	3/4 X 3/4	464442	21.546	0.022	0.048
741062	Pureflow Crimp (USA)	Pex Crimp Fittings	V5045ZLAdapter 3/4x3/4F 0 1 9	Adapter	V5045ZL	3/4 X 3/4 F	466453	37.013	0.037	0.082
741063	Pureflow Crimp (USA)	Pex Crimp Fittings	V5046ZLAdapter 3/4x3/4M 0 1 9	Adapter	V5046ZL	3/4 X 3/4 M	466446	30.572	0.031	0.067
741064	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 1x3/4 0 1 9	Coupling	V5015ZL	1 X 3/4	464541	33.793	0.034	0.075
741065	Pureflow Crimp (USA)	Pex Crimp Fittings	V5015ZLCoupling 1x1 0 1 9	Coupling	V5015ZL	1 X 1	464558	37.421	0.037	0.082
741066	Pureflow Crimp (USA)	Pex Crimp Fittings	V5024ZLAdapter 1x1M 0 1 9	Adapter	V5024ZL	1 X 1 M	466545	83.687	0.084	0.184
741072	Pureflow Crimp (USA)	Pex Crimp Fittings	V5027ZLWall plate 1/2x1/2FPT 0 1 9	Wall plate	V5027ZL	1/2 X 1/2 FPT	462332	82.781	0.083	0.183
741073	Pureflow Crimp (USA)	Pex Crimp Fittings	V5027ZLWall plate 3/4x3/4FPT 0 1 9	Wall plate	V5027ZL	3/4 X 3/4 FPT	462448	130.635	0.131	0.288
741074	Pureflow Crimp (USA)	Pex Crimp Fittings	V5016ZLElbow coupling 3/8x3/8 0 1 9	Elbow coupling	V5016ZL	3/8 X 3/8	469225	21.5	0.022	0.047
741075	Pureflow Crimp (USA)	Pex Crimp Fittings	V5016ZLElbow coupling 1/2PEXx1/2PEX0 1 9	Elbow coupling	V5016ZL	1/2 PEX X 1/2 PEX	469331	20.411	0.02	0.045
741076	Pureflow Crimp (USA)	Pex Crimp Fittings	V5016ZLElbow coupling 3/4x3/4 0 1 9	Elbow coupling	V5016ZL	3/4 X 3/4	469447	36.287	0.036	0.08
741077	Pureflow Crimp (USA)	Pex Crimp Fittings	V5016ZLElbow coupling 1PEXx1PEX 0 1 9	Elbow coupling	V5016ZL	1 PEX X 1 PEX	469553	66.905	0.067	0.148
741078	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 3/8x1/2FPT 0 1 9	Adapter	V5012ZL	3/8 X 1/2 FPT	463230	42.547	0.043	0.094
741079	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 1/2x1/2FPT 0 1 9	Adapter	V5012ZL	1/2 X 1/2 FPT	463339	40.638	0.041	0.09
741080	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 3/4x3/4FPT 0 1 9	Adapter	V5012ZL	3/4 X 3/4 FPT	463445	66.859	0.067	0.147
741081	Pureflow Crimp (USA)	Pex Crimp Fittings	V5012ZLAdapter 1x1FPT 0 1 9	Adapter	V5012ZL	1 X 1 FPT	463551	106.367	0.106	0.234
741083	Pureflow Crimp (USA)	Pex Crimp Fittings	V5014ZLElbow 1/2x1/2MPT 0 1 9	Elbow	V5014ZL	1/2 X 1/2 MPT	468211	94.12	0.094	0.207
741084	Pureflow Crimp (USA)	Pex Crimp Fittings	V5047ZLCoupling 3/4PEx3/4PEX 0 1 9	Coupling	V5047ZL	3/4 PE X 3/4 PEX	461458	50.167	0.05	0.111
741085	Pureflow Crimp (USA)	Pex Crimp Fittings	V5047ZLCoupling 1PEx1PEX 0 1 9	Coupling	V5047ZL	1 PE X 1 PEX	461564	75.296	0.075	0.166
741086	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/8 0 1 9	Tee	V5018ZL	3/8	465005	28.304	0.028	0.062
741087	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1/2 0 1 9	Tee	V5018ZL	1/2	465203	26.081	0.026	0.057
741088	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/4x1/2x1/2 0 1 9	Tee	V5018ZL	3/4 X 1/2 X 1/2	464336	46.811	0.047	0.103
741089	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 3/4 0 1 9	Tee	V5018ZL	3/4	465401	45.269	0.045	0.1
741090	Pureflow Crimp (USA)	Pex Crimp Fittings	V5018ZLTee 1 0 1 9	Tee	V5018ZL	1	465609	78.925	0.079	0.174
741091	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 3/8x1/2MPT 0 1 9	Adapter	V5011ZL	3/8 X 1/2 MPT	463025	46.38	0.046	0.102
741092	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 1/2x1/2MPT 0 1 9	Adapter	V5011ZL	1/2 X 1/2 MPT	463216	45.67	0.046	0.101
741093	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 3/4x3/4MPT 0 1 9	Adapter	V5011ZL	3/4 X 3/4 MPT	463407	66.587	0.067	0.147
741094	Pureflow Crimp (USA)	Pex Crimp Fittings	V5011ZLAdapter 1x1MPT 0 1 9	Adapter	V5011ZL	1 X 1 MPT	463667	107.047	0.107	0.236
741541	Pureflow Crimp (USA)	Pexel KS Fittings	V5218 Tee 3/8 5 399	Tee	V5218	3/8	435008	4.445	0.004	0.01
742211	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x11/4x3/4 5 A 9	Tee	V5618	11/2 X 11/4 X 3/4	498744	92.986	0.093	0.205
742221	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2X11/4X1 5 A 9	Tee	V5618	11/2 X 11/4 X 1	498751	102.058	0.102	0.225
742231	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2X11/4X11/4 5 A 9	Tee	V5618	11/2 X 11/4 X 11/4	498775	124.737	0.125	0.275
742241	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2X11/2X3/4 5 A 9	Tee	V5618	2 X 1 1/2 X 3/4	499840	0.134	0	0
742251	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 2x2x1/2 5 A 9	Tee	V5618	2 X 2 X 1/2	499932	140	0.14	0.309
743051	Pureflow Crimp (USA)	Poly PEX Press	V5618 Tee 11/2x11/2x1/2 5 A 9	Tee	V5618	1 1/2 X 1 1/2 X1/2	498836	97	0.097	0.214
765430	Pureflow Press (USA)	Pexcel Pureflow Accessory	2867US Clip up-to-2 5 A 9	Clip	2867US	UP-TO-2	520070	40.823	0.041	0.09
765431	Pureflow Press (USA)	Pexcel Pureflow Accessory	28671USClip up-to-2 5 A 9	Clip	28671US	UP-TO-2	520179	40.823	0.041	0.09
765432	Pureflow Press (USA)	Pexcel Pureflow Accessory	2868US Clamp 2 5 Z 9	Clamp	2868US	2	560908	19.958	0.02	0.044

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
765433	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US Clip 2 5 A 9	Clip	2863US	2	580777	22.68	0.023	0.05
765440	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 2 5 Z 9	pipe-Clip	2861US	2	550909	16.329	0.016	0.036
765831	Pureflow Crimp (USA)	Pex Crimp Fittings	28729ZLHousing 1/2Arrest 5 B 9	Housing	28729ZL	1/2 ARREST	467306	825.537	0.826	1.82
765843	Pureflow Crimp (USA)	Pex Crimp Fittings	28728ZLHousing 3/8Arrest 5 B 9	Housing	28728ZL	3/8 ARREST	467108	480.801	0.481	1.06
765844	Pureflow Crimp (USA)	Pex Crimp Fittings	28728ZLHousing 1/2Arrest 5 B 9	Housing	28728ZL	1/2 ARREST	467207	437.716	0.438	0.965
765852	ManaBloc (USA)	Pexfit-Manifold	V5067 Manifold 1/2x5 5 Z 9	Manifold	V5067	1/2 X 5	510637	979.758	0.98	2.16
765855	ManaBloc (USA)	Pexfit-Manifold	V5067 Manifold 1/2x7 5 Z 9	Manifold	V5067	1/2 X 7	510736	1301.809	1.302	2.87
765858	ManaBloc (USA)	Pexfit-Manifold	V5067 Manifold 1/2x10 5 Z 9	Manifold	V5067	1/2 X 10	510033	1650.507	1.651	3.639
771667	Pureflow Press (USA)	Pexcel Pureflow Accessory	28005USsupport pipe 3/8 0 7 9	support pipe	28005US	3/8	525006	18.824	0.019	0.041
771677	Pureflow Press (USA)	Pexcel Pureflow Accessory	28005USsupport pipe 1/2 0 7 9	support pipe	28005US	1/2	525204	26.308	0.026	0.058
771691	Pureflow Press (USA)	Pexcel Pureflow Accessory	28501USPipe guide 1/2 5 Z 9	Pipe guide	28501US	1/2	505206	89.629	0.09	0.198
771701	Pureflow Press (USA)	Pexcel Pureflow Accessory	28502USPipe guide 3/8 5 Z 9	Pipe guide	28502US	3/8	510002	28.123	0.028	0.062
771711	Pureflow Press (USA)	Pexcel Pureflow Accessory	28502USPipe guide 1/2 5 Z 9	Pipe guide	28502US	1/2	510200	37.455	0.037	0.083
771721	Pureflow Press (USA)	Pexcel Pureflow Accessory	28503USPipe guide 1/2 5 Z 9	Pipe guide	28503US	1/2	510217	36	0.036	0.079
771731	Pureflow Press (USA)	Pexcel Pureflow Accessory	28504USPipe guide - 7 H 9	Pipe guide	28504US	-	510224	256	0.256	0.564
771741	Pureflow Press (USA)	Pexcel Pureflow Accessory	28502USPipe guide 5/8x3/4 5 Z 9	Pipe guide	28502US	5/8 X 3/4	510408	69.853	0.07	0.154
771751	Pureflow Press (USA)	Pexcel Pureflow Accessory	28502USPipe guide 1 5 Z 9	Pipe guide	28502US	1	510606	117	0.117	0.258
771816	Pureflow Press (USA)	Pexcel Pureflow Accessory	2852US Protective nozzle 3/8+1/2blue 5 K 8	Protective nozzle	2852US	3/8 + 1/2 BLUE	545202	18.144	0.018	0.04
771821	Pureflow Press (USA)	Pexcel Pureflow Accessory	2860US pipe-Clip 3/8 5 Z 9	pipe-Clip	2860US	3/8	520001	2.886	0.003	0.006
771831	Pureflow Press (USA)	Pexcel Pureflow Accessory	2860US pipe-Clip 1/2 5 Z 9	pipe-Clip	2860US	1/2	520209	3.54	0.004	0.008
771841	Pureflow Press (USA)	Pexcel Pureflow Accessory	2860US pipe-Clip 3/4 5 Z 9	pipe-Clip	2860US	3/4	520407	6.018	0.006	0.013
771851	Pureflow Press (USA)	Pexcel Pureflow Accessory	2860US pipe-Clip 1 5 Z 9	pipe-Clip	2860US	1	520605	9.525	0.01	0.021
771861	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 1/2 5 Z 9	pipe-Clip	2861US	1/2	550206	4.354	0.004	0.01
771871	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 3/4 5 Z 9	pipe-Clip	2861US	3/4	550404	5.443	0.005	0.012
771881	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 1 5 Z 9	pipe-Clip	2861US	1	550602	7.257	0.007	0.016
771981	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 3/8 5 A 9	pipe-Clip	2863US	3/8	580715	4	0.004	0.009
771991	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 1/2 5 A 9	pipe-Clip	2863US	1/2	580722	6	0.006	0.013
772001	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 3/4 5 A 9	pipe-Clip	2863US	3/4	580739	4	0.004	0.009
772011	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 1 5 A 9	pipe-Clip	2863US	1	580746	9	0.009	0.02

Material	System	Product subgroup	Material short text	Designation	Model no.	Dimensions	Item no.	Mass in grams	Mass in kg	Mass in lbs
777562	ManaBloc (USA)	Pexfit-Manifold	V503051Manifold 3/8x1/2x18 5 Z 9	Manifold	V503051	3/8 X 1/2 X 18	516189	2871.239	2.871	6.33
797002	Pureflow Press (USA)	Pexcel Pureflow Accessory	V503610Cap 1ManablocEndCap 5 A 9	Cap	V503610	1 MANABLOC END Cap	536019	37.273	0.037	0.082
797261	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 11/4 5 Z 9	pipe-Clip	2861US	1 1/4	550701	10.1	0.01	0.022
797271	Pureflow Press (USA)	Pexcel Pureflow Accessory	2861US pipe-Clip 11/2 5 Z 9	pipe-Clip	2861US	1 1/2	550800	14.2	0.014	0.031
797281	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 11/4 5 A 9	pipe-Clip	2863US	1 1/4	580753	13.6	0.014	0.03
797291	Pureflow Press (USA)	Pexcel Pureflow Accessory	2863US pipe-Clip 11/2 5 A 9	pipe-Clip	2863US	1 1/2	580760	18	0.018	0.04
799002	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 1x10 7 0 9	pipe half shell	V5083	1 X 10	684307	848.22	0.848	1.87
799003	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 11/4x10 7 0 9	pipe half shell	V5083	1 1/4 X 10	684314	828.259	0.828	1.826
799004	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 11/2x10 7 0 9	pipe half shell	V5083	1 1/2 X 10	684321	1153.485	1.153	2.543
799005	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 2x10 7 0 9	pipe half shell	V5083	2 X 10	684338	1421.104	1.421	3.133
799006	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 1/2x10 7 0 9	pipe half shell	V5083	1/2 X 10	684345	589.67	0.59	1.3
799007	Pureflow Press (USA)	Pexcel Pureflow Accessory	V5083 pipe half shell 3/4x10 7 0 9	pipe half shell	V5083	3/4 X 10	684352	907.185	0.907	2
799651	Pureflow Press (USA)	Pexcel Pureflow Accessory	2867US Clip 3/8x1Multi 5 A 9	Clip	2867US	3/8 X 1 MULTI	520063	11	0.011	0.024
799761	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 1x1x1/2 5 A 9	Manifold	V50312	1 X 1 X 1/2	652580	179.5	0.18	0.396
799771	Pureflow Crimp (USA)	Pexel KS Fittings	V503122Manifold 3/4x1/2 5 A 9	Manifold	V503122	3/4 X 1/2	651040	111.583	0.112	0.246
799781	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 3/4x3/4x1/2 5 A 9	Manifold	V50312	3/4 X 3/4 X 1/2	651521	61.1	0.061	0.135
799791	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 3/4x3/4x1/2 5 A 9	Manifold	V50312	3/4 X 3/4 X 1/2	651538	89.357	0.089	0.197
799801	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 3/4x3/4x1/2 5 A 9	Manifold	V50312	3/4 X 3/4 X 1/2	651545	112.944	0.113	0.249
799811	Pureflow Crimp (USA)	Pexel KS Fittings	V503122Manifold 1x1/2 5 A 9	Manifold	V503122	1 X 1/2	652061	155.582	0.156	0.343
799821	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 1x1/2 5 A 9	Manifold	V50312	1 X 1/2	652542	114.305	0.114	0.252
799831	Pureflow Crimp (USA)	Pexel KS Fittings	V50312 Manifold 1x1x1/2 5 A 9	Manifold	V50312	1 X 1 X 1/2	652566	158.303	0.158	0.349
799971	Pureflow Crimp (USA)	Pexel KS Fittings	V5213 Adapter 3/4PEXxManablocS 5 A 9	Adapter	V5213	3/4PEX XMANABLOC S	501413	43.317	0.043	0.095
799972	Pureflow Crimp (USA)	Pexel KS Fittings	V5213 Adapter 1PEXxManablocS 5 A 9	Adapter	V5213	1 PEX XMANABLOC S	501512	45.36	0.045	0.1

Pipes: Conversion table for unit weights

Material	System	Material short text	Designation	Mass in grams	Mass in kg	Mass in kg per m	Mass in lbs per ft
651765	PureFlow	V50031 V. pex Ultra-Pipe 1/2x500 5B2A9	Pipe	83.34	0.083	0.083	0.056
651766	PureFlow	V50031 V. pex Ultra-Pipe 3/4 5B2A9	Pipe	476.43	0.476	0.476	0.32
651931	PureFlow	V5003 V. pex Ultra-Pipe 1/4x100 5 B 9	Pipe	48.05	0.048	0.048	0.032
652310	PureFlow	V5001 V. pex Ultra-Pipe 1/2x100 5 L 9	Pipe	86.18	0.086	0.086	0.058

Material	System	Material short text	Designation	Mass in grams	Mass in kg	Mass in kg per m	Mass in lbs per ft
653969	PureFlow	V5003 V. pex Ultra-Pipe 3/4x1 5 B 9	Pipe	154.2	0.154	0.154	0.104
654041	PureFlow	V5001 V. pex Ultra-Pipe 1x300 5 L 9	Pipe	251.4	0.251	0.251	0.169
654042	PureFlow	V5001 V. pex Ultra-Pipe 1x100 5 L 9	Pipe	251.4	0.251	0.251	0.169
654481	PureFlow	V5002 V. pex Ultra-Pipe 1x300 5 K 9	Pipe	251.4	0.251	0.251	0.169
652851	PureFlow	V5003 V. pex Ultra-Pipe 11/4x100 5 B 9	Pipe	379.33	0.379	0.379	0.255
652861	PureFlow	V5003 V. pex Ultra-Pipe 11/2x100 5 B 9	Pipe	526.07	0.526	0.526	0.354
652871	PureFlow	V5003 V. pex Ultra-Pipe 2x100 5 B 9	Pipe	937.54	0.938	0.938	0.63
652881	PureFlow	V5003 V. pex Ultra-Pipe 11/4x300 5 B 9	Pipe	379.33	0.379	0.379	0.255
655932	PureFlow	V50035 V. pex Ultra-Pipe 11/4x20 5 B 9	Pipe	379.33	0.379	0.379	0.255
655942	PureFlow	V50035 V. pex Ultra-Pipe 11/2x20 5 B 9	Pipe	526.07	0.526	0.526	0.354
655952	PureFlow	V50035 V. pex Ultra-Pipe 2x20 5 B 9	Pipe	937.54	0.938	0.938	0.63

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Notes
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