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# Environmental report
# „Pipe shoe MP-PS L1 & L2“

## December 2021

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# 1 Life Cycle Assessment „Pipe shoe MP-PS L1 & L2 “

## 1.1 Technical data and material distribution

**Table 1.1: Technical data and material distribution**

| IT- Number | Product name | Pcs. per salespack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330922 | Pipe shoe MP-PS L1-1 21-26 1/2" OC | 8 | 12,366 | Steel, Polymer, Cardboard |
| 2330923 | Pipe shoe MP-PS L1-1 26-31 3/4" OC | 8 | 12,507 | Steel, Polymer, Cardboard |
| 2330924 | Pipe shoe MP-PS L1-1 32-37 1" OC | 8 | 12,708 | Steel, Polymer, Cardboard |
| 2330925 | Pipe shoe MP-PS L1-1 38-44 1-1/4" OC | 8 | 12,838 | Steel, Polymer, Cardboard |
| 2330926 | Pipe shoe MP-PS L1-1 45-51 1-1/2" OC | 8 | 13,052 | Steel, Polymer, Cardboard |
| 2330927 | Pipe shoe MP-PS L1-1 52-58 OC | 8 | 14,568 | Steel, Polymer, Cardboard |
| 2330928 | Pipe shoe MP-PS L1-1 59-65 2" OC | 4 | 9,564 | Steel, Polymer, Cardboard |
| 2330929 | Pipe shoe MP-PS L1-1 68-74 OC | 4 | 7,826 | Steel, Polymer, Cardboard |
| 2330930 | Pipe shoe MP-PS L1-1 75-81 2-1/2" OC | 4 | 7,971 | Steel, Polymer, Cardboard |
| 2330931 | Pipe shoe MP-PS L1-1 88-94 3" OC | 4 | 8,196 | Steel, Polymer, Cardboard |
| 2330932 | Pipe shoe MP-PS L1-1 100-108 3-1/2" OC | 4 | 8,422 | Steel, Polymer, Cardboard |
| 2330933 | Pipe shoe MP-PS L1-1 110-118 4" OC | 4 | 8,601 | Steel, Polymer, Cardboard |
| 2330934 | Pipe shoe MP-PS L1-1 125-133 OC | 4 | 8,901 | Steel, Polymer, Cardboard |
| 2330935 | Pipe shoe MP-PS L1-1 136-144 5" OC | 4 | 9,126 | Steel, Polymer, Cardboard |
| 2330936 | Pipe shoe MP-PS L1-1 152-162 OC | 4 | 9,483 | Steel, Polymer, Cardboard |
| 2330937 | Pipe shoe MP-PS L1-1 163-173 6" OC | 4 | 9,709 | Steel, Polymer, Cardboard |
| 2330973 | Pipe shoe MP-PS L2-2 21-26 1/2" OC | 4 | 13,002 | Steel, Polymer, Cardboard |
| 2330974 | Pipe shoe MP-PS L2-2 26-31 3/4" OC | 4 | 13,144 | Steel, Polymer, Cardboard |
| 2330975 | Pipe shoe MP-PS L2-2 32-37 1" OC | 4 | 13,344 | Steel, Polymer, Cardboard |
| 2330976 | Pipe shoe MP-PS L2-2 38-44 1-1/4" OC | 4 | 13,474 | Steel, Polymer, Cardboard |

| IT- Number | Product name | Pcs. per salespack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330977 | Pipe shoe MP-PS L2-2 45-51 1-1/2" OC | 4 | 13,688 | Steel, Polymer, Cardboard |
| 2330978 | Pipe shoe MP-PS L2-2 52-58 OC | 4 | 15,205 | Steel, Polymer, Cardboard |
| 2330979 | Pipe shoe MP-PS L2-2 59-65 2" OC | 4 | 15,490 | Steel, Polymer, Cardboard |
| 2330980 | Pipe shoe MP-PS L2-2 68-74 OC | 4 | 15,852 | Steel, Polymer, Cardboard |
| 2330981 | Pipe shoe MP-PS L2-2 75-81 2-1/2" OC | 4 | 16,143 | Steel, Polymer, Cardboard |
| 2330982 | Pipe shoe MP-PS L2-2 88-94 3" OC | 2 | 11,054 | Steel, Polymer, Cardboard |
| 2330983 | Pipe shoe MP-PS L2-2 100-108 3-1/2" OC | 2 | 8,810 | Steel, Polymer, Cardboard |
| 2330984 | Pipe shoe MP-PS L2-2 110-118 4" OC | 2 | 8,990 | Steel, Polymer, Cardboard |
| 2330985 | Pipe shoe MP-PS L2-2 125-133 OC | 2 | 9,290 | Steel, Polymer, Cardboard |
| 2330986 | Pipe shoe MP-PS L2-2 136-144 5" OC | 2 | 9,515 | Steel, Polymer, Cardboard |
| 2330987 | Pipe shoe MP-PS L2-2 152-162 OC | 2 | 9,872 | Steel, Polymer, Cardboard |
| 2330988 | Pipe shoe MP-PS L2-2 163-173 6" OC | 2 | 10,098 | Steel, Polymer, Cardboard |
| 2330989 | Pipe shoe MP-PS L2-2 192-202 7" OC | 2 | 12,768 | Steel, Polymer, Cardboard |
| 2330990 | Pipe shoe MP-PS L2-2 217-227 8" OC | 2 | 13,515 | Steel, Polymer, Cardboard |
| 2330991 | Pipe shoe MP-PS L2-2 244-254 OC | 2 | 15,242 | Steel, Polymer, Cardboard |
| 2330992 | Pipe shoe MP-PS L2-2 267-277 10" OC | 2 | 15,914 | Steel, Polymer, Cardboard |
| 2330993 | Pipe shoe MP-PS L2-2 318-328 12" OC | 2 | 17,405 | Steel, Polymer, Cardboard |
| 2331076 | Connector Pipe shoe MT-FPS-FF OC set | 8 | 2,229 | Steel, Polymer |
| 2331077 | Connector Pipe shoe MT-FPS-FZL OC | 2 | 1,197 | Steel, Polymer |
| 2331078 | Connector Pipe shoe MT-FPS-SZ1 OC set | 12 | 2,137 | Steel, Polymer |

| IT- Number | Product name | Pcs. per salespack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331080 | Connector Pipe shoe MT-FPS-GL1 OC set | 12 | 2,212 | Steel, Polymer |
| 2331079 | Connector Pipe shoe MT-FPS-SZ2 OC set | 10 | 2,573 | Steel, Polymer |
| 2331081 | Connector Pipe shoe MT-FPS-GL2 OC set | 10 | 2,547 | Steel, Polymer |
| 2330920 | Connector Pipe shoe MT-FPS-SF OC set | 8 | 2,211 | Steel, Polymer |
| 2330921 | Connector Pipe shoe MT-FPS-GF OC set | 8 | 2,412 | Steel, Polymer |

## 1.2 Description of the applied method

A life cycle assessment according to DIN EN ISO 14040/44, was performed on a product of HILTI AG (Pipe shoe MP-PS L1 & L2), which considers the entire life cycle of the product (cradle to grave). The accounting data come from the source: GaBi 10, and are evaluated from IPCC 2001, April. 2015.

The entire life cycle of the product is divided into the following stages:

- Raw material,e
- Production,
- Use,
- End of life,
- Transportation.

The data for the raw material acquisition of the product is provided by HILTI AG in a specific data collection form.

Each material is assigned component specific to one or more manufacturing processes to describe the production process as precisely as possible.

The products produce no emissions in the “Use” phase.

In the “End of life” it is assumed, that the entire product is first fed to a reduction process. A Shredder (QZ 1600 HD) from MeWa, is used for separating and crushing the individual materials. The respective credits come from the material recycling of metals, as well as from the energy recovery of the paper and the polymers.

The “Transportation” scenario is based on the Limit Stretch of the EPTA study published by Sphera and is evaluated according to the weight of the product. The first transport reflects the transport distances, which are essential for bringing together the individual components (by sea- a container ship for 16 800 km for 30% of the product weight, by road- a truck for 4 716 km for 70% of the product weight).
The second transport reflects the distribution of the product to the various sales companies within the EU (2 300 km by road in a truck for 100% of the product weight). The emissions of both transports are added together in this report.

## 1.3 Life Cycle Assessment

### 1.3.1 Pipe shoe MP-PS L1-1 21-26 1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330922 | Pipe shoe MP-PS L1-1 21-26 1/2" OC | 8 | 12,366 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 13,799 | 24,818 | 4,232 | 0,000 | -20,815 | 5,564 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,17E-12 | 7,05E-12 | 1,35E-13 | 0,000 | -1,86E-14 | 9,63E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,20E-02 | 5,79E-02 | 8,29E-03 | 0,000 | -4,83E-02 | 4,42E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,15E-02 | 5,92E-03 | 9,76E-04 | 0,000 | -4,48E-03 | 9,10E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,06E-02 | 8,50E-03 | 6,09E-04 | 0,000 | -7,40E-03 | -1,24E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,17E-06 | 2,33E-06 | 1,41E-06 | 0,000 | -3,56E-08 | 4,60E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,64E+02 | 2,18E+02 | 4,87E+01 | 0,000 | -1,79E+02 | 7,57E+01 |
| Energy (net calorific value) [MJ] | 1,95E+02 | 2,22E+02 | 7,70E+01 | 0,000 | -1,80E+02 | 7,59E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,08E+01 | 1,88E+01 | 3,47E+01 | 0,000 | -6,63E+00 | 3,88E+00 |
| Water consumption [kg] | 7,27E+01 | 5,86E+01 | 3,41E+01 | 0,000 | -2,45E+01 | 4,46E+00 |
| Air pollution [$m^3$] | 1,05E+03 | 2,89E+03 | 2,67E+02 | 0,000 | -2,51E+03 | 4,08E+02 |
| Water pollution [$m^3$] | 2,83E+00 | 1,46E+00 | 1,11E+00 | 0,000 | -8,94E-01 | 1,16E+00 |
| Hazardous waste for disposal [kg] | 1,41E-07 | 1,16E-07 | 2,00E-08 | 0,000 | 1,03E-09 | 3,54E-09 |
| Disposed of non-hazardous waste [kg] | 1,38E-01 | 3,14E-01 | 5,37E-02 | 0,000 | -2,41E-01 | 1,10E-02 |
| Disposed of radioactive waste [kg] | 1,22E-02 | 1,28E-03 | 1,12E-02 | 0,000 | -3,45E-04 | 9,14E-05 |

evaluated from CML 2001, April. 2015

### 1.3.2 Pipe shoe MP-PS L1-1 26-31 3/4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330923 | Pipe shoe MP-PS L1-1 26-31 3/4" OC | 8 | 12,507 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 13,940 | 25,144 | 4,235 | 0,000 | -21,066 | 5,628 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,17E-12 | 7,05E-12 | 1,35E-13 | 0,000 | -1,88E-14 | 9,74E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,27E-02 | 5,86E-02 | 8,30E-03 | 0,000 | -4,89E-02 | 4,47E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,16E-02 | 5,99E-03 | 9,77E-04 | 0,000 | -4,54E-03 | 9,21E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,08E-02 | 8,60E-03 | 6,09E-04 | 0,000 | -7,49E-03 | -1,25E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,18E-06 | 2,34E-06 | 1,42E-06 | 0,000 | -3,57E-08 | 4,66E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,66E+02 | 2,21E+02 | 4,88E+01 | 0,000 | -1,81E+02 | 7,66E+01 |
| Energy (net calorific value) [MJ] | 1,97E+02 | 2,25E+02 | 7,70E+01 | 0,000 | -1,82E+02 | 7,68E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,09E+01 | 1,90E+01 | 3,47E+01 | 0,000 | -6,70E+00 | 3,93E+00 |
| Water consumption [kg] | 7,27E+01 | 5,88E+01 | 3,41E+01 | 0,000 | -2,48E+01 | 4,51E+00 |
| Air pollution [$m^3$] | 1,06E+03 | 2,92E+03 | 2,67E+02 | 0,000 | -2,54E+03 | 4,12E+02 |
| Water pollution [$m^3$] | 2,85E+00 | 1,47E+00 | 1,11E+00 | 0,000 | -9,04E-01 | 1,18E+00 |
| Hazardous waste for disposal [kg] | 1,41E-07 | 1,16E-07 | 2,01E-08 | 0,000 | 1,06E-09 | 3,58E-09 |
| Disposed of non-hazardous waste [kg] | 1,39E-01 | 3,18E-01 | 5,38E-02 | 0,000 | -2,44E-01 | 1,11E-02 |
| Disposed of radioactive waste [kg] | 1,23E-02 | 1,30E-03 | 1,12E-02 | 0,000 | -3,46E-04 | 9,24E-05 |

evaluated from CML 2001, April. 2015

### 1.3.3 Pipe shoe MP-PS L1-1 32-37 1" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330924 | Pipe shoe MP-PS L1-1 32-37 1" OC | 8 | 12,708 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,140 | 25,606 | 4,239 | 0,000 | -21,423 | 5,718 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,17E-12 | 7,05E-12 | 1,35E-13 | 0,000 | -1,90E-14 | 9,89E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,36E-02 | 5,96E-02 | 8,31E-03 | 0,000 | -4,97E-02 | 4,54E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,18E-02 | 6,09E-03 | 9,78E-04 | 0,000 | -4,61E-03 | 9,36E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,10E-02 | 8,74E-03 | 6,10E-04 | 0,000 | -7,61E-03 | -1,27E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,20E-06 | 2,34E-06 | 1,42E-06 | 0,000 | -3,58E-08 | 4,73E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,68E+02 | 2,25E+02 | 4,88E+01 | 0,000 | -1,84E+02 | 7,78E+01 |
| Energy (net calorific value) [MJ] | 2,00E+02 | 2,29E+02 | 7,71E+01 | 0,000 | -1,85E+02 | 7,80E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,11E+01 | 1,92E+01 | 3,48E+01 | 0,000 | -6,80E+00 | 3,99E+00 |
| Water consumption [kg] | 7,26E+01 | 5,91E+01 | 3,42E+01 | 0,000 | -2,52E+01 | 4,58E+00 |
| Air pollution [$m^3$] | 1,07E+03 | 2,97E+03 | 2,68E+02 | 0,000 | -2,59E+03 | 4,19E+02 |
| Water pollution [$m^3$] | 2,88E+00 | 1,50E+00 | 1,11E+00 | 0,000 | -9,19E-01 | 1,20E+00 |
| Hazardous waste for disposal [kg] | 1,41E-07 | 1,16E-07 | 2,01E-08 | 0,000 | 1,09E-09 | 3,64E-09 |
| Disposed of non-hazardous waste [kg] | 1,40E-01 | 3,23E-01 | 5,38E-02 | 0,000 | -2,48E-01 | 1,13E-02 |
| Disposed of radioactive waste [kg] | 1,23E-02 | 1,32E-03 | 1,12E-02 | 0,000 | -3,48E-04 | 9,39E-05 |

evaluated from CML 2001, April. 2015

### 1.3.4 Pipe shoe MP-PS L1-1 38-44 1-1/4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330925 | Pipe shoe MP-PS L1-1 38-44 1-1/4" OC | 8 | 12,838 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,269 | 25,905 | 4,242 | 0,000 | -21,654 | 5,777 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,17E-12 | 7,05E-12 | 1,35E-13 | 0,000 | -1,92E-14 | 9,99E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,42E-02 | 6,02E-02 | 8,31E-03 | 0,000 | -5,02E-02 | 4,59E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,19E-02 | 6,15E-03 | 9,78E-04 | 0,000 | -4,66E-03 | 9,45E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,11E-02 | 8,83E-03 | 6,10E-04 | 0,000 | -7,69E-03 | -1,28E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,21E-06 | 2,35E-06 | 1,42E-06 | 0,000 | -3,58E-08 | 4,78E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,70E+02 | 2,28E+02 | 4,88E+01 | 0,000 | -1,86E+02 | 7,86E+01 |
| Energy (net calorific value) [MJ] | 2,01E+02 | 2,32E+02 | 7,71E+01 | 0,000 | -1,86E+02 | 7,88E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,13E+01 | 1,93E+01 | 3,48E+01 | 0,000 | -6,86E+00 | 4,03E+00 |
| Water consumption [kg] | 7,26E+01 | 5,92E+01 | 3,42E+01 | 0,000 | -2,55E+01 | 4,63E+00 |
| Air pollution [$m^3$] | 1,07E+03 | 3,00E+03 | 2,68E+02 | 0,000 | -2,61E+03 | 4,23E+02 |
| Water pollution [$m^3$] | 2,90E+00 | 1,51E+00 | 1,11E+00 | 0,000 | -9,28E-01 | 1,21E+00 |
| Hazardous waste for disposal [kg] | 1,41E-07 | 1,16E-07 | 2,01E-08 | 0,000 | 1,12E-09 | 3,68E-09 |
| Disposed of non-hazardous waste [kg] | 1,41E-01 | 3,27E-01 | 5,39E-02 | 0,000 | -2,51E-01 | 1,14E-02 |
| Disposed of radioactive waste [kg] | 1,23E-02 | 1,34E-03 | 1,12E-02 | 0,000 | -3,49E-04 | 9,49E-05 |

evaluated from CML 2001, April. 2015

### 1.3.5 Pipe shoe MP-PS L1-1 45-51 1-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330926 | Pipe shoe MP-PS L1-1 45-51 1-1/2" OC | 8 | 13,052 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,482 | 26,398 | 4,247 | 0,000 | -22,035 | 5,873 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,17E-12 | 7,05E-12 | 1,36E-13 | 0,000 | -1,95E-14 | 1,02E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,51E-02 | 6,13E-02 | 8,32E-03 | 0,000 | -5,11E-02 | 4,66E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,21E-02 | 6,26E-03 | 9,79E-04 | 0,000 | -4,74E-03 | 9,61E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,13E-02 | 8,98E-03 | 6,11E-04 | 0,000 | -7,83E-03 | -1,30E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,22E-06 | 2,35E-06 | 1,42E-06 | 0,000 | -3,59E-08 | 4,86E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,73E+02 | 2,33E+02 | 4,89E+01 | 0,000 | -1,89E+02 | 7,99E+01 |
| Energy (net calorific value) [MJ] | 2,04E+02 | 2,36E+02 | 7,72E+01 | 0,000 | -1,90E+02 | 8,02E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,15E+01 | 1,95E+01 | 3,48E+01 | 0,000 | -6,97E+00 | 4,10E+00 |
| Water consumption [kg] | 7,25E+01 | 5,95E+01 | 3,42E+01 | 0,000 | -2,59E+01 | 4,71E+00 |
| Air pollution [$m^3$] | 1,09E+03 | 3,05E+03 | 2,68E+02 | 0,000 | -2,66E+03 | 4,30E+02 |
| Water pollution [$m^3$] | 2,93E+00 | 1,53E+00 | 1,11E+00 | 0,000 | -9,44E-01 | 1,23E+00 |
| Hazardous waste for disposal [kg] | 1,41E-07 | 1,16E-07 | 2,01E-08 | 0,000 | 1,15E-09 | 3,74E-09 |
| Disposed of non-hazardous waste [kg] | 1,42E-01 | 3,32E-01 | 5,39E-02 | 0,000 | -2,56E-01 | 1,16E-02 |
| Disposed of radioactive waste [kg] | 1,24E-02 | 1,36E-03 | 1,13E-02 | 0,000 | -3,51E-04 | 9,64E-05 |

evaluated from CML 2001, April. 2015

### 1.3.6 Pipe shoe MP-PS L1-1 52-58 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330927 | Pipe shoe MP-PS L1-1 52-58 OC | 8 | 14,568 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 16,037 | 29,780 | 4,435 | 0,000 | -24,733 | 6,556 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,18E-12 | 7,06E-12 | 1,42E-13 | 0,000 | -2,15E-14 | 1,13E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,21E-02 | 6,86E-02 | 8,69E-03 | 0,000 | -5,72E-02 | 5,21E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,34E-02 | 6,98E-03 | 1,02E-03 | 0,000 | -5,32E-03 | 1,07E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,27E-02 | 1,00E-02 | 6,38E-04 | 0,000 | -8,77E-03 | -1,46E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,38E-06 | 2,39E-06 | 1,48E-06 | 0,000 | -3,65E-08 | 5,43E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,92E+02 | 2,62E+02 | 5,11E+01 | 0,000 | -2,11E+02 | 8,92E+01 |
| Energy (net calorific value) [MJ] | 2,25E+02 | 2,67E+02 | 8,07E+01 | 0,000 | -2,12E+02 | 8,95E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,42E+01 | 2,10E+01 | 3,64E+01 | 0,000 | -7,72E+00 | 4,58E+00 |
| Water consumption [kg] | 7,38E+01 | 6,20E+01 | 3,57E+01 | 0,000 | -2,92E+01 | 5,26E+00 |
| Air pollution [$m^3$] | 1,19E+03 | 3,40E+03 | 2,80E+02 | 0,000 | -2,98E+03 | 4,80E+02 |
| Water pollution [$m^3$] | 3,18E+00 | 1,70E+00 | 1,16E+00 | 0,000 | -1,05E+00 | 1,37E+00 |
| Hazardous waste for disposal [kg] | 1,44E-07 | 1,17E-07 | 2,10E-08 | 0,000 | 1,42E-09 | 4,18E-09 |
| Disposed of non-hazardous waste [kg] | 1,54E-01 | 3,72E-01 | 5,63E-02 | 0,000 | -2,88E-01 | 1,29E-02 |
| Disposed of radioactive waste [kg] | 1,30E-02 | 1,53E-03 | 1,18E-02 | 0,000 | -3,63E-04 | 1,08E-04 |

evaluated from CML 2001, April. 2015

### 1.3.7 Pipe shoe MP-PS L1-1 59-65 2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330928 | Pipe shoe MP-PS L1-1 59-65 2" OC | 4 | 9,564 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,472 | 19,712 | 2,287 | 0,000 | -15,829 | 4,302 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,11E-12 | 7,05E-12 | 7,30E-14 | 0,000 | -1,49E-14 | 7,45E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,73E-02 | 4,56E-02 | 4,48E-03 | 0,000 | -3,70E-02 | 3,42E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,97E-03 | 4,83E-03 | 5,27E-04 | 0,000 | -3,43E-03 | 7,04E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,36E-03 | 6,52E-03 | 3,29E-04 | 0,000 | -5,66E-03 | -9,54E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,43E-06 | 2,34E-06 | 7,65E-07 | 0,000 | -3,45E-08 | 3,56E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,26E+02 | 1,79E+02 | 2,63E+01 | 0,000 | -1,37E+02 | 5,85E+01 |
| Energy (net calorific value) [MJ] | 1,44E+02 | 1,82E+02 | 4,16E+01 | 0,000 | -1,38E+02 | 5,87E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,35E+01 | 1,70E+01 | 1,88E+01 | 0,000 | -5,25E+00 | 3,00E+00 |
| Water consumption [kg] | 5,18E+01 | 4,84E+01 | 1,84E+01 | 0,000 | -1,85E+01 | 3,44E+00 |
| Air pollution [$m^3$] | 7,45E+02 | 2,21E+03 | 1,44E+02 | 0,000 | -1,92E+03 | 3,15E+02 |
| Water pollution [$m^3$] | 2,06E+00 | 1,26E+00 | 5,99E-01 | 0,000 | -6,91E-01 | 8,99E-01 |
| Hazardous waste for disposal [kg] | 1,32E-07 | 1,18E-07 | 1,08E-08 | 0,000 | 5,46E-10 | 2,74E-09 |
| Disposed of non-hazardous waste [kg] | 1,08E-01 | 2,51E-01 | 2,90E-02 | 0,000 | -1,81E-01 | 8,47E-03 |
| Disposed of radioactive waste [kg] | 6,89E-03 | 1,08E-03 | 6,06E-03 | 0,000 | -3,21E-04 | 7,07E-05 |

evaluated from CML 2001, April. 2015

### 1.3.8 Pipe shoe MP-PS L1-1 68-74 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330929 | Pipe shoe MP-PS L1-1 68-74 OC | 4 | 7,826 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 8,740 | 15,708 | 2,248 | 0,000 | -12,736 | 3,520 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,04E-12 | 7,18E-14 | 0,000 | -1,26E-14 | 6,09E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 3,95E-02 | 3,71E-02 | 4,41E-03 | 0,000 | -2,99E-02 | 2,79E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 7,49E-03 | 3,99E-03 | 5,19E-04 | 0,000 | -2,77E-03 | 5,75E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -6,74E-03 | 5,32E-03 | 3,23E-04 | 0,000 | -4,59E-03 | -7,80E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,30E-06 | 2,29E-06 | 7,52E-07 | 0,000 | -3,38E-08 | 2,91E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,05E+02 | 1,43E+02 | 2,59E+01 | 0,000 | -1,12E+02 | 4,79E+01 |
| Energy (net calorific value) [MJ] | 1,22E+02 | 1,46E+02 | 4,09E+01 | 0,000 | -1,13E+02 | 4,80E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,17E+01 | 1,52E+01 | 1,84E+01 | 0,000 | -4,39E+00 | 2,45E+00 |
| Water consumption [kg] | 5,23E+01 | 4,62E+01 | 1,81E+01 | 0,000 | -1,48E+01 | 2,81E+00 |
| Air pollution [$m^3$] | 6,45E+02 | 1,80E+03 | 1,42E+02 | 0,000 | -1,56E+03 | 2,58E+02 |
| Water pollution [$m^3$] | 1,82E+00 | 1,06E+00 | 5,89E-01 | 0,000 | -5,65E-01 | 7,35E-01 |
| Hazardous waste for disposal [kg] | 1,30E-07 | 1,16E-07 | 1,06E-08 | 0,000 | 2,43E-10 | 2,24E-09 |
| Disposed of non-hazardous waste [kg] | 9,57E-02 | 2,04E-01 | 2,86E-02 | 0,000 | -1,43E-01 | 6,93E-03 |
| Disposed of radioactive waste [kg] | 6,59E-03 | 8,78E-04 | 5,96E-03 | 0,000 | -3,07E-04 | 5,78E-05 |

evaluated from CML 2001, April. 2015

### 1.3.9 Pipe shoe MP-PS L1-1 75-81 2-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330930 | Pipe shoe MP-PS L1-1 75-81 2-1/2" OC | 4 | 7,971 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 8,885 | 16,042 | 2,251 | 0,000 | -12,994 | 3,585 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,04E-12 | 7,19E-14 | 0,000 | -1,28E-14 | 6,21E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,01E-02 | 3,78E-02 | 4,41E-03 | 0,000 | -3,05E-02 | 2,84E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 7,61E-03 | 4,06E-03 | 5,19E-04 | 0,000 | -2,82E-03 | 5,86E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -6,88E-03 | 5,42E-03 | 3,24E-04 | 0,000 | -4,68E-03 | -7,94E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,31E-06 | 2,29E-06 | 7,53E-07 | 0,000 | -3,39E-08 | 2,96E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,07E+02 | 1,46E+02 | 2,59E+01 | 0,000 | -1,14E+02 | 4,88E+01 |
| Energy (net calorific value) [MJ] | 1,24E+02 | 1,49E+02 | 4,09E+01 | 0,000 | -1,15E+02 | 4,89E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,19E+01 | 1,54E+01 | 1,85E+01 | 0,000 | -4,47E+00 | 2,50E+00 |
| Water consumption [kg] | 5,23E+01 | 4,63E+01 | 1,82E+01 | 0,000 | -1,51E+01 | 2,87E+00 |
| Air pollution [$m^3$] | 6,53E+02 | 1,84E+03 | 1,42E+02 | 0,000 | -1,59E+03 | 2,63E+02 |
| Water pollution [$m^3$] | 1,84E+00 | 1,08E+00 | 5,90E-01 | 0,000 | -5,75E-01 | 7,48E-01 |
| Hazardous waste for disposal [kg] | 1,30E-07 | 1,17E-07 | 1,07E-08 | 0,000 | 2,69E-10 | 2,28E-09 |
| Disposed of non-hazardous waste [kg] | 9,67E-02 | 2,08E-01 | 2,86E-02 | 0,000 | -1,47E-01 | 7,06E-03 |
| Disposed of radioactive waste [kg] | 6,62E-03 | 8,95E-04 | 5,97E-03 | 0,000 | -3,08E-04 | 5,89E-05 |

evaluated from CML 2001, April. 2015

### 1.3.10 Pipe shoe MP-PS L1-1 88-94 3" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330931 | Pipe shoe MP-PS L1-1 88-94 3" OC | 4 | 8,196 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 9,109 | 16,560 | 2,256 | 0,000 | -13,394 | 3,686 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,04E-12 | 7,21E-14 | 0,000 | -1,31E-14 | 6,38E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,11E-02 | 3,89E-02 | 4,42E-03 | 0,000 | -3,14E-02 | 2,93E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 7,80E-03 | 4,17E-03 | 5,20E-04 | 0,000 | -2,91E-03 | 6,02E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,08E-03 | 5,58E-03 | 3,25E-04 | 0,000 | -4,82E-03 | -8,17E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,33E-06 | 2,30E-06 | 7,55E-07 | 0,000 | -3,39E-08 | 3,05E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,10E+02 | 1,51E+02 | 2,60E+01 | 0,000 | -1,17E+02 | 5,02E+01 |
| Energy (net calorific value) [MJ] | 1,27E+02 | 1,54E+02 | 4,10E+01 | 0,000 | -1,18E+02 | 5,03E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,21E+01 | 1,56E+01 | 1,85E+01 | 0,000 | -4,58E+00 | 2,57E+00 |
| Water consumption [kg] | 5,22E+01 | 4,66E+01 | 1,82E+01 | 0,000 | -1,56E+01 | 2,95E+00 |
| Air pollution [$m^3$] | 6,66E+02 | 1,89E+03 | 1,42E+02 | 0,000 | -1,64E+03 | 2,70E+02 |
| Water pollution [$m^3$] | 1,87E+00 | 1,10E+00 | 5,91E-01 | 0,000 | -5,92E-01 | 7,70E-01 |
| Hazardous waste for disposal [kg] | 1,30E-07 | 1,17E-07 | 1,07E-08 | 0,000 | 3,08E-10 | 2,34E-09 |
| Disposed of non-hazardous waste [kg] | 9,82E-02 | 2,14E-01 | 2,87E-02 | 0,000 | -1,51E-01 | 7,26E-03 |
| Disposed of radioactive waste [kg] | 6,65E-03 | 9,21E-04 | 5,98E-03 | 0,000 | -3,10E-04 | 6,06E-05 |

evaluated from CML 2001, April. 2015

### 1.3.11 Pipe shoe MP-PS L1-1 100-108 3-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330932 | Pipe shoe MP-PS L1-1 100-108 3-1/2" OC | 4 | 8,422 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 9,336 | 17,075 | 2,269 | 0,000 | -13,797 | 3,788 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,04E-12 | 7,25E-14 | 0,000 | -1,34E-14 | 6,56E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,22E-02 | 4,00E-02 | 4,45E-03 | 0,000 | -3,23E-02 | 3,01E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,00E-03 | 4,28E-03 | 5,23E-04 | 0,000 | -2,99E-03 | 6,19E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,29E-03 | 5,73E-03 | 3,26E-04 | 0,000 | -4,96E-03 | -8,40E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,35E-06 | 2,31E-06 | 7,59E-07 | 0,000 | -3,40E-08 | 3,13E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,12E+02 | 1,55E+02 | 2,61E+01 | 0,000 | -1,21E+02 | 5,15E+01 |
| Energy (net calorific value) [MJ] | 1,30E+02 | 1,58E+02 | 4,13E+01 | 0,000 | -1,21E+02 | 5,17E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,24E+01 | 1,58E+01 | 1,86E+01 | 0,000 | -4,69E+00 | 2,64E+00 |
| Water consumption [kg] | 5,22E+01 | 4,70E+01 | 1,83E+01 | 0,000 | -1,60E+01 | 3,03E+00 |
| Air pollution [$m^3$] | 6,80E+02 | 1,94E+03 | 1,43E+02 | 0,000 | -1,68E+03 | 2,77E+02 |
| Water pollution [$m^3$] | 1,90E+00 | 1,13E+00 | 5,95E-01 | 0,000 | -6,08E-01 | 7,91E-01 |
| Hazardous waste for disposal [kg] | 1,30E-07 | 1,17E-07 | 1,07E-08 | 0,000 | 3,47E-10 | 2,41E-09 |
| Disposed of non-hazardous waste [kg] | 9,98E-02 | 2,20E-01 | 2,88E-02 | 0,000 | -1,56E-01 | 7,46E-03 |
| Disposed of radioactive waste [kg] | 6,71E-03 | 9,47E-04 | 6,02E-03 | 0,000 | -3,12E-04 | 6,22E-05 |

evaluated from CML 2001, April. 2015

### 1.3.12 Pipe shoe MP-PS L1-1 110-118 4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330933 | Pipe shoe MP-PS L1-1 110-118 4" OC | 4 | 8,601 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 9,515 | 17,489 | 2,273 | 0,000 | -14,116 | 3,869 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,04E-12 | 7,26E-14 | 0,000 | -1,36E-14 | 6,70E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,30E-02 | 4,09E-02 | 4,46E-03 | 0,000 | -3,31E-02 | 3,07E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,15E-03 | 4,36E-03 | 5,24E-04 | 0,000 | -3,06E-03 | 6,32E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,46E-03 | 5,86E-03 | 3,27E-04 | 0,000 | -5,07E-03 | -8,58E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,36E-06 | 2,31E-06 | 7,60E-07 | 0,000 | -3,41E-08 | 3,20E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,15E+02 | 1,59E+02 | 2,62E+01 | 0,000 | -1,23E+02 | 5,26E+01 |
| Energy (net calorific value) [MJ] | 1,32E+02 | 1,62E+02 | 4,13E+01 | 0,000 | -1,24E+02 | 5,28E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,26E+01 | 1,60E+01 | 1,87E+01 | 0,000 | -4,78E+00 | 2,70E+00 |
| Water consumption [kg] | 5,22E+01 | 4,72E+01 | 1,83E+01 | 0,000 | -1,64E+01 | 3,09E+00 |
| Air pollution [$m^3$] | 6,90E+02 | 1,99E+03 | 1,44E+02 | 0,000 | -1,72E+03 | 2,83E+02 |
| Water pollution [$m^3$] | 1,93E+00 | 1,15E+00 | 5,96E-01 | 0,000 | -6,21E-01 | 8,08E-01 |
| Hazardous waste for disposal [kg] | 1,31E-07 | 1,17E-07 | 1,08E-08 | 0,000 | 3,78E-10 | 2,46E-09 |
| Disposed of non-hazardous waste [kg] | 1,01E-01 | 2,25E-01 | 2,89E-02 | 0,000 | -1,60E-01 | 7,62E-03 |
| Disposed of radioactive waste [kg] | 6,75E-03 | 9,68E-04 | 6,03E-03 | 0,000 | -3,13E-04 | 6,36E-05 |

evaluated from CML 2001, April. 2015

### 1.3.13 Pipe shoe MP-PS L1-1 125-133 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330934 | Pipe shoe MP-PS L1-1 125-133 OC | 4 | 8,901 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 9,814 | 18,180 | 2,280 | 0,000 | -14,650 | 4,004 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,10E-12 | 7,05E-12 | 7,28E-14 | 0,000 | -1,40E-14 | 6,93E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,43E-02 | 4,24E-02 | 4,47E-03 | 0,000 | -3,43E-02 | 3,18E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,41E-03 | 4,51E-03 | 5,26E-04 | 0,000 | -3,18E-03 | 6,55E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,74E-03 | 6,06E-03 | 3,28E-04 | 0,000 | -5,25E-03 | -8,88E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,38E-06 | 2,32E-06 | 7,63E-07 | 0,000 | -3,42E-08 | 3,31E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,18E+02 | 1,65E+02 | 2,62E+01 | 0,000 | -1,28E+02 | 5,45E+01 |
| Energy (net calorific value) [MJ] | 1,36E+02 | 1,68E+02 | 4,15E+01 | 0,000 | -1,28E+02 | 5,46E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,29E+01 | 1,63E+01 | 1,87E+01 | 0,000 | -4,92E+00 | 2,79E+00 |
| Water consumption [kg] | 5,21E+01 | 4,76E+01 | 1,84E+01 | 0,000 | -1,71E+01 | 3,20E+00 |
| Air pollution [$m^3$] | 7,07E+02 | 2,06E+03 | 1,44E+02 | 0,000 | -1,79E+03 | 2,93E+02 |
| Water pollution [$m^3$] | 1,97E+00 | 1,18E+00 | 5,97E-01 | 0,000 | -6,43E-01 | 8,36E-01 |
| Hazardous waste for disposal [kg] | 1,31E-07 | 1,17E-07 | 1,08E-08 | 0,000 | 4,30E-10 | 2,55E-09 |
| Disposed of non-hazardous waste [kg] | 1,03E-01 | 2,33E-01 | 2,90E-02 | 0,000 | -1,67E-01 | 7,89E-03 |
| Disposed of radioactive waste [kg] | 6,80E-03 | 1,00E-03 | 6,05E-03 | 0,000 | -3,16E-04 | 6,58E-05 |

evaluated from CML 2001, April. 2015

### 1.3.14 Pipe shoe MP-PS L1-1 136-144 5" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330935 | Pipe shoe MP-PS L1-1 136-144 5" OC | 4 | 9,126 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,038 | 18,698 | 2,285 | 0,000 | -15,050 | 4,105 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,11E-12 | 7,05E-12 | 7,30E-14 | 0,000 | -1,43E-14 | 7,11E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,53E-02 | 4,35E-02 | 4,48E-03 | 0,000 | -3,52E-02 | 3,26E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,60E-03 | 4,62E-03 | 5,27E-04 | 0,000 | -3,26E-03 | 6,71E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,95E-03 | 6,22E-03 | 3,29E-04 | 0,000 | -5,39E-03 | -9,10E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,40E-06 | 2,33E-06 | 7,64E-07 | 0,000 | -3,43E-08 | 3,39E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,21E+02 | 1,70E+02 | 2,63E+01 | 0,000 | -1,31E+02 | 5,59E+01 |
| Energy (net calorific value) [MJ] | 1,39E+02 | 1,73E+02 | 4,16E+01 | 0,000 | -1,32E+02 | 5,60E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,31E+01 | 1,66E+01 | 1,87E+01 | 0,000 | -5,04E+00 | 2,86E+00 |
| Water consumption [kg] | 5,20E+01 | 4,79E+01 | 1,84E+01 | 0,000 | -1,76E+01 | 3,28E+00 |
| Air pollution [$m^3$] | 7,20E+02 | 2,11E+03 | 1,44E+02 | 0,000 | -1,83E+03 | 3,01E+02 |
| Water pollution [$m^3$] | 2,00E+00 | 1,21E+00 | 5,99E-01 | 0,000 | -6,59E-01 | 8,57E-01 |
| Hazardous waste for disposal [kg] | 1,31E-07 | 1,17E-07 | 1,08E-08 | 0,000 | 4,70E-10 | 2,61E-09 |
| Disposed of non-hazardous waste [kg] | 1,05E-01 | 2,39E-01 | 2,90E-02 | 0,000 | -1,71E-01 | 8,09E-03 |
| Disposed of radioactive waste [kg] | 6,84E-03 | 1,03E-03 | 6,06E-03 | 0,000 | -3,18E-04 | 6,75E-05 |

evaluated from CML 2001, April. 2015

### 1.3.15 Pipe shoe MP-PS L1-1 152-162 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330936 | Pipe shoe MP-PS L1-1 152-162 OC | 4 | 9,483 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,401 | 19,502 | 2,318 | 0,000 | -15,685 | 4,266 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,11E-12 | 7,05E-12 | 7,41E-14 | 0,000 | -1,48E-14 | 7,38E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,70E-02 | 4,52E-02 | 4,54E-03 | 0,000 | -3,66E-02 | 3,39E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,90E-03 | 4,79E-03 | 5,35E-04 | 0,000 | -3,40E-03 | 6,98E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,28E-03 | 6,47E-03 | 3,33E-04 | 0,000 | -5,61E-03 | -9,46E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,43E-06 | 2,34E-06 | 7,75E-07 | 0,000 | -3,45E-08 | 3,53E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,26E+02 | 1,77E+02 | 2,67E+01 | 0,000 | -1,36E+02 | 5,80E+01 |
| Energy (net calorific value) [MJ] | 1,44E+02 | 1,80E+02 | 4,22E+01 | 0,000 | -1,37E+02 | 5,82E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,37E+01 | 1,69E+01 | 1,90E+01 | 0,000 | -5,21E+00 | 2,97E+00 |
| Water consumption [kg] | 5,22E+01 | 4,84E+01 | 1,87E+01 | 0,000 | -1,83E+01 | 3,41E+00 |
| Air pollution [$m^3$] | 7,43E+02 | 2,19E+03 | 1,46E+02 | 0,000 | -1,91E+03 | 3,12E+02 |
| Water pollution [$m^3$] | 2,06E+00 | 1,24E+00 | 6,07E-01 | 0,000 | -6,85E-01 | 8,91E-01 |
| Hazardous waste for disposal [kg] | 1,32E-07 | 1,18E-07 | 1,10E-08 | 0,000 | 5,32E-10 | 2,71E-09 |
| Disposed of non-hazardous waste [kg] | 1,07E-01 | 2,48E-01 | 2,94E-02 | 0,000 | -1,79E-01 | 8,40E-03 |
| Disposed of radioactive waste [kg] | 6,97E-03 | 1,07E-03 | 6,15E-03 | 0,000 | -3,21E-04 | 7,01E-05 |

evaluated from CML 2001, April. 2015

### 1.3.16 Pipe shoe MP-PS L1-1 163-173 6" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330937 | Pipe shoe MP-PS L1-1 163-173 6" OC | 4 | 9,709 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,626 | 20,023 | 2,323 | 0,000 | -16,087 | 4,368 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 7,11E-12 | 7,05E-12 | 7,42E-14 | 0,000 | -1,51E-14 | 7,56E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,80E-02 | 4,63E-02 | 4,55E-03 | 0,000 | -3,76E-02 | 3,47E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 9,10E-03 | 4,90E-03 | 5,36E-04 | 0,000 | -3,48E-03 | 7,14E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,49E-03 | 6,62E-03 | 3,34E-04 | 0,000 | -5,75E-03 | -9,69E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,45E-06 | 2,35E-06 | 7,77E-07 | 0,000 | -3,46E-08 | 3,61E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,28E+02 | 1,82E+02 | 2,67E+01 | 0,000 | -1,40E+02 | 5,94E+01 |
| Energy (net calorific value) [MJ] | 1,46E+02 | 1,85E+02 | 4,22E+01 | 0,000 | -1,40E+02 | 5,96E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,39E+01 | 1,71E+01 | 1,91E+01 | 0,000 | -5,32E+00 | 3,05E+00 |
| Water consumption [kg] | 5,21E+01 | 4,87E+01 | 1,87E+01 | 0,000 | -1,88E+01 | 3,50E+00 |
| Air pollution [$m^3$] | 7,56E+02 | 2,24E+03 | 1,47E+02 | 0,000 | -1,96E+03 | 3,20E+02 |
| Water pollution [$m^3$] | 2,09E+00 | 1,27E+00 | 6,09E-01 | 0,000 | -7,01E-01 | 9,12E-01 |
| Hazardous waste for disposal [kg] | 1,32E-07 | 1,18E-07 | 1,10E-08 | 0,000 | 5,71E-10 | 2,78E-09 |
| Disposed of non-hazardous waste [kg] | 1,09E-01 | 2,55E-01 | 2,95E-02 | 0,000 | -1,84E-01 | 8,60E-03 |
| Disposed of radioactive waste [kg] | 7,00E-03 | 1,10E-03 | 6,16E-03 | 0,000 | -3,23E-04 | 7,18E-05 |

evaluated from CML 2001, April. 2015

### 1.3.17 Pipe shoe MP-PS L2-2 21-26 1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330973 | Pipe shoe MP-PS L2-2 21-26 1/2" OC | 4 | 13,002 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,907 | 26,143 | 4,477 | 0,000 | -21,560 | 5,847 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,70E-12 | 8,57E-12 | 1,43E-13 | 0,000 | -2,02E-14 | 1,01E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,67E-02 | 6,18E-02 | 8,77E-03 | 0,000 | -5,03E-02 | 4,64E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,25E-02 | 6,59E-03 | 1,03E-03 | 0,000 | -4,65E-03 | 9,55E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,10E-02 | 8,97E-03 | 6,44E-04 | 0,000 | -7,71E-03 | -1,29E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,14E-06 | 4,20E-06 | 1,50E-06 | 0,000 | -4,74E-08 | 4,83E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,77E+02 | 2,33E+02 | 5,15E+01 | 0,000 | -1,87E+02 | 7,96E+01 |
| Energy (net calorific value) [MJ] | 2,11E+02 | 2,38E+02 | 8,14E+01 | 0,000 | -1,88E+02 | 7,98E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,49E+01 | 2,13E+01 | 3,67E+01 | 0,000 | -7,14E+00 | 4,07E+00 |
| Water consumption [kg] | 9,97E+01 | 8,41E+01 | 3,61E+01 | 0,000 | -2,52E+01 | 4,67E+00 |
| Air pollution [$m^3$] | 1,13E+03 | 3,04E+03 | 2,83E+02 | 0,000 | -2,62E+03 | 4,28E+02 |
| Water pollution [$m^3$] | 3,07E+00 | 1,62E+00 | 1,17E+00 | 0,000 | -9,41E-01 | 1,22E+00 |
| Hazardous waste for disposal [kg] | 1,67E-07 | 1,41E-07 | 2,12E-08 | 0,000 | 7,56E-10 | 3,71E-09 |
| Disposed of non-hazardous waste [kg] | 1,53E-01 | 3,33E-01 | 5,69E-02 | 0,000 | -2,48E-01 | 1,15E-02 |
| Disposed of radioactive waste [kg] | 1,29E-02 | 1,37E-03 | 1,19E-02 | 0,000 | -4,36E-04 | 9,61E-05 |

evaluated from CML 2001, April. 2015

### 1.3.18 Pipe shoe MP-PS L2-2 26-31 3/4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330974 | Pipe shoe MP-PS L2-2 26-31 3/4" OC | 4 | 13,144 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 15,048 | 26,469 | 4,481 | 0,000 | -21,812 | 5,911 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,70E-12 | 8,57E-12 | 1,43E-13 | 0,000 | -2,04E-14 | 1,02E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,73E-02 | 6,25E-02 | 8,78E-03 | 0,000 | -5,08E-02 | 4,69E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,26E-02 | 6,66E-03 | 1,03E-03 | 0,000 | -4,70E-03 | 9,65E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,12E-02 | 9,07E-03 | 6,44E-04 | 0,000 | -7,79E-03 | -1,31E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,15E-06 | 4,21E-06 | 1,50E-06 | 0,000 | -4,74E-08 | 4,88E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,79E+02 | 2,36E+02 | 5,16E+01 | 0,000 | -1,89E+02 | 8,04E+01 |
| Energy (net calorific value) [MJ] | 2,13E+02 | 2,41E+02 | 8,15E+01 | 0,000 | -1,90E+02 | 8,07E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,51E+01 | 2,14E+01 | 3,68E+01 | 0,000 | -7,21E+00 | 4,11E+00 |
| Water consumption [kg] | 9,96E+01 | 8,43E+01 | 3,61E+01 | 0,000 | -2,55E+01 | 4,72E+00 |
| Air pollution [$m^3$] | 1,14E+03 | 3,08E+03 | 2,83E+02 | 0,000 | -2,65E+03 | 4,33E+02 |
| Water pollution [$m^3$] | 3,09E+00 | 1,64E+00 | 1,17E+00 | 0,000 | -9,51E-01 | 1,23E+00 |
| Hazardous waste for disposal [kg] | 1,67E-07 | 1,41E-07 | 2,12E-08 | 0,000 | 7,81E-10 | 3,75E-09 |
| Disposed of non-hazardous waste [kg] | 1,54E-01 | 3,36E-01 | 5,69E-02 | 0,000 | -2,51E-01 | 1,16E-02 |
| Disposed of radioactive waste [kg] | 1,29E-02 | 1,39E-03 | 1,19E-02 | 0,000 | -4,37E-04 | 9,72E-05 |

evaluated from CML 2001, April. 2015

### 1.3.19 Pipe shoe MP-PS L2-2 32-37 1" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330975 | Pipe shoe MP-PS L2-2 32-37 1" OC | 4 | 13,344 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 15,248 | 26,931 | 4,485 | 0,000 | -22,169 | 6,001 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,70E-12 | 8,57E-12 | 1,43E-13 | 0,000 | -2,07E-14 | 1,04E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,82E-02 | 6,35E-02 | 8,79E-03 | 0,000 | -5,16E-02 | 4,76E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,28E-02 | 6,75E-03 | 1,03E-03 | 0,000 | -4,78E-03 | 9,80E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,14E-02 | 9,21E-03 | 6,45E-04 | 0,000 | -7,92E-03 | -1,33E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,16E-06 | 4,21E-06 | 1,50E-06 | 0,000 | -4,75E-08 | 4,96E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,82E+02 | 2,40E+02 | 5,16E+01 | 0,000 | -1,92E+02 | 8,16E+01 |
| Energy (net calorific value) [MJ] | 2,15E+02 | 2,45E+02 | 8,16E+01 | 0,000 | -1,93E+02 | 8,19E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,53E+01 | 2,16E+01 | 3,68E+01 | 0,000 | -7,31E+00 | 4,18E+00 |
| Water consumption [kg] | 9,96E+01 | 8,45E+01 | 3,62E+01 | 0,000 | -2,60E+01 | 4,79E+00 |
| Air pollution [$m^3$] | 1,15E+03 | 3,12E+03 | 2,83E+02 | 0,000 | -2,69E+03 | 4,39E+02 |
| Water pollution [$m^3$] | 3,12E+00 | 1,66E+00 | 1,18E+00 | 0,000 | -9,65E-01 | 1,25E+00 |
| Hazardous waste for disposal [kg] | 1,67E-07 | 1,41E-07 | 2,12E-08 | 0,000 | 8,16E-10 | 3,81E-09 |
| Disposed of non-hazardous waste [kg] | 1,55E-01 | 3,42E-01 | 5,70E-02 | 0,000 | -2,55E-01 | 1,18E-02 |
| Disposed of radioactive waste [kg] | 1,30E-02 | 1,41E-03 | 1,19E-02 | 0,000 | -4,39E-04 | 9,87E-05 |

evaluated from CML 2001, April. 2015

### 1.3.20 Pipe shoe MP-PS L2-2 38-44 1-1/4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330976 | Pipe shoe MP-PS L2-2 38-44 1-1/4" OC | 4 | 13,474 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 15,377 | 27,229 | 4,488 | 0,000 | -22,400 | 6,059 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,70E-12 | 8,57E-12 | 1,43E-13 | 0,000 | -2,09E-14 | 1,05E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,88E-02 | 6,41E-02 | 8,80E-03 | 0,000 | -5,22E-02 | 4,81E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,29E-02 | 6,82E-03 | 1,04E-03 | 0,000 | -4,82E-03 | 9,90E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,15E-02 | 9,30E-03 | 6,45E-04 | 0,000 | -8,00E-03 | -1,34E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,17E-06 | 4,22E-06 | 1,50E-06 | 0,000 | -4,76E-08 | 5,00E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,83E+02 | 2,43E+02 | 5,17E+01 | 0,000 | -1,94E+02 | 8,24E+01 |
| Energy (net calorific value) [MJ] | 2,17E+02 | 2,48E+02 | 8,16E+01 | 0,000 | -1,95E+02 | 8,27E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,54E+01 | 2,17E+01 | 3,68E+01 | 0,000 | -7,37E+00 | 4,22E+00 |
| Water consumption [kg] | 9,95E+01 | 8,47E+01 | 3,62E+01 | 0,000 | -2,62E+01 | 4,84E+00 |
| Air pollution [$m^3$] | 1,16E+03 | 3,15E+03 | 2,83E+02 | 0,000 | -2,72E+03 | 4,44E+02 |
| Water pollution [$m^3$] | 3,14E+00 | 1,68E+00 | 1,18E+00 | 0,000 | -9,75E-01 | 1,26E+00 |
| Hazardous waste for disposal [kg] | 1,67E-07 | 1,41E-07 | 2,13E-08 | 0,000 | 8,38E-10 | 3,85E-09 |
| Disposed of non-hazardous waste [kg] | 1,56E-01 | 3,45E-01 | 5,70E-02 | 0,000 | -2,58E-01 | 1,19E-02 |
| Disposed of radioactive waste [kg] | 1,30E-02 | 1,43E-03 | 1,19E-02 | 0,000 | -4,40E-04 | 9,96E-05 |

evaluated from CML 2001, April. 2015

### 1.3.21 Pipe shoe MP-PS L2-2 45-51 1-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330977 | Pipe shoe MP-PS L2-2 45-51 1-1/2" OC | 4 | 13,688 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 15,590 | 27,723 | 4,493 | 0,000 | -22,781 | 6,156 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,70E-12 | 8,57E-12 | 1,43E-13 | 0,000 | -2,11E-14 | 1,07E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,98E-02 | 6,52E-02 | 8,80E-03 | 0,000 | -5,30E-02 | 4,88E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,31E-02 | 6,92E-03 | 1,04E-03 | 0,000 | -4,91E-03 | 1,01E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,17E-02 | 9,45E-03 | 6,46E-04 | 0,000 | -8,13E-03 | -1,36E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,19E-06 | 4,22E-06 | 1,50E-06 | 0,000 | -4,77E-08 | 5,08E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,86E+02 | 2,48E+02 | 5,17E+01 | 0,000 | -1,97E+02 | 8,38E+01 |
| Energy (net calorific value) [MJ] | 2,19E+02 | 2,52E+02 | 8,17E+01 | 0,000 | -1,98E+02 | 8,40E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,56E+01 | 2,19E+01 | 3,69E+01 | 0,000 | -7,48E+00 | 4,28E+00 |
| Water consumption [kg] | 9,94E+01 | 8,50E+01 | 3,62E+01 | 0,000 | -2,67E+01 | 4,92E+00 |
| Air pollution [$m^3$] | 1,17E+03 | 3,20E+03 | 2,84E+02 | 0,000 | -2,76E+03 | 4,51E+02 |
| Water pollution [$m^3$] | 3,17E+00 | 1,70E+00 | 1,18E+00 | 0,000 | -9,90E-01 | 1,28E+00 |
| Hazardous waste for disposal [kg] | 1,67E-07 | 1,41E-07 | 2,13E-08 | 0,000 | 8,76E-10 | 3,91E-09 |
| Disposed of non-hazardous waste [kg] | 1,58E-01 | 3,51E-01 | 5,71E-02 | 0,000 | -2,63E-01 | 1,21E-02 |
| Disposed of radioactive waste [kg] | 1,30E-02 | 1,45E-03 | 1,19E-02 | 0,000 | -4,42E-04 | 1,01E-04 |

evaluated from CML 2001, April. 2015

### 1.3.22 Pipe shoe MP-PS L2-2 52-58 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330978 | Pipe shoe MP-PS L2-2 52-58 OC | 4 | 15,205 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 17,145 | 31,105 | 4,681 | 0,000 | -25,479 | 6,839 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,71E-12 | 8,58E-12 | 1,50E-13 | 0,000 | -2,31E-14 | 1,18E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,68E-02 | 7,25E-02 | 9,17E-03 | 0,000 | -5,92E-02 | 5,43E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,44E-02 | 7,64E-03 | 1,08E-03 | 0,000 | -5,48E-03 | 1,12E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,31E-02 | 1,05E-02 | 6,73E-04 | 0,000 | -9,07E-03 | -1,52E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,34E-06 | 4,26E-06 | 1,57E-06 | 0,000 | -4,83E-08 | 5,65E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,05E+02 | 2,77E+02 | 5,39E+01 | 0,000 | -2,19E+02 | 9,30E+01 |
| Energy (net calorific value) [MJ] | 2,40E+02 | 2,82E+02 | 8,51E+01 | 0,000 | -2,21E+02 | 9,33E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,83E+01 | 2,34E+01 | 3,84E+01 | 0,000 | -8,23E+00 | 4,76E+00 |
| Water consumption [kg] | 1,01E+02 | 8,75E+01 | 3,78E+01 | 0,000 | -2,99E+01 | 5,47E+00 |
| Air pollution [$m^3$] | 1,27E+03 | 3,56E+03 | 2,96E+02 | 0,000 | -3,08E+03 | 5,01E+02 |
| Water pollution [$m^3$] | 3,42E+00 | 1,86E+00 | 1,23E+00 | 0,000 | -1,10E+00 | 1,43E+00 |
| Hazardous waste for disposal [kg] | 1,70E-07 | 1,42E-07 | 2,22E-08 | 0,000 | 1,14E-09 | 4,35E-09 |
| Disposed of non-hazardous waste [kg] | 1,69E-01 | 3,91E-01 | 5,95E-02 | 0,000 | -2,95E-01 | 1,35E-02 |
| Disposed of radioactive waste [kg] | 1,37E-02 | 1,62E-03 | 1,24E-02 | 0,000 | -4,54E-04 | 1,12E-04 |

evaluated from CML 2001, April. 2015

### 1.3.23 Pipe shoe MP-PS L2-2 59-65 2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330979 | Pipe shoe MP-PS L2-2 59-65 2" OC | 4 | 15,490 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 17,429 | 31,762 | 4,687 | 0,000 | -25,986 | 6,967 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,71E-12 | 8,58E-12 | 1,50E-13 | 0,000 | -2,35E-14 | 1,21E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,81E-02 | 7,39E-02 | 9,19E-03 | 0,000 | -6,03E-02 | 5,53E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,47E-02 | 7,78E-03 | 1,08E-03 | 0,000 | -5,59E-03 | 1,14E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,33E-02 | 1,07E-02 | 6,74E-04 | 0,000 | -9,25E-03 | -1,54E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,37E-06 | 4,27E-06 | 1,57E-06 | 0,000 | -4,84E-08 | 5,76E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,08E+02 | 2,83E+02 | 5,40E+01 | 0,000 | -2,24E+02 | 9,48E+01 |
| Energy (net calorific value) [MJ] | 2,44E+02 | 2,88E+02 | 8,52E+01 | 0,000 | -2,25E+02 | 9,51E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,86E+01 | 2,37E+01 | 3,85E+01 | 0,000 | -8,37E+00 | 4,85E+00 |
| Water consumption [kg] | 1,01E+02 | 8,79E+01 | 3,78E+01 | 0,000 | -3,05E+01 | 5,57E+00 |
| Air pollution [$m^3$] | 1,29E+03 | 3,62E+03 | 2,96E+02 | 0,000 | -3,14E+03 | 5,10E+02 |
| Water pollution [$m^3$] | 3,46E+00 | 1,89E+00 | 1,23E+00 | 0,000 | -1,12E+00 | 1,45E+00 |
| Hazardous waste for disposal [kg] | 1,70E-07 | 1,42E-07 | 2,22E-08 | 0,000 | 1,19E-09 | 4,43E-09 |
| Disposed of non-hazardous waste [kg] | 1,71E-01 | 3,99E-01 | 5,95E-02 | 0,000 | -3,01E-01 | 1,37E-02 |
| Disposed of radioactive waste [kg] | 1,37E-02 | 1,65E-03 | 1,24E-02 | 0,000 | -4,57E-04 | 1,14E-04 |

evaluated from CML 2001, April. 2015

### 1.3.24 Pipe shoe MP-PS L2-2 68-74 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330980 | Pipe shoe MP-PS L2-2 68-74 OC | 4 | 15,852 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 17,790 | 32,596 | 4,695 | 0,000 | -26,631 | 7,130 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,71E-12 | 8,58E-12 | 1,50E-13 | 0,000 | -2,40E-14 | 1,23E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,97E-02 | 7,57E-02 | 9,20E-03 | 0,000 | -6,18E-02 | 5,66E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3-}$ eq.] | 1,50E-02 | 7,96E-03 | 1,08E-03 | 0,000 | -5,72E-03 | 1,17E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,37E-02 | 1,09E-02 | 6,75E-04 | 0,000 | -9,47E-03 | -1,58E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,39E-06 | 4,28E-06 | 1,57E-06 | 0,000 | -4,85E-08 | 5,89E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,13E+02 | 2,91E+02 | 5,41E+01 | 0,000 | -2,29E+02 | 9,70E+01 |
| Energy (net calorific value) [MJ] | 2,48E+02 | 2,96E+02 | 8,54E+01 | 0,000 | -2,30E+02 | 9,73E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,90E+01 | 2,41E+01 | 3,85E+01 | 0,000 | -8,55E+00 | 4,97E+00 |
| Water consumption [kg] | 1,01E+02 | 8,83E+01 | 3,79E+01 | 0,000 | -3,13E+01 | 5,70E+00 |
| Air pollution [$m^3$] | 1,31E+03 | 3,71E+03 | 2,96E+02 | 0,000 | -3,22E+03 | 5,22E+02 |
| Water pollution [$m^3$] | 3,51E+00 | 1,94E+00 | 1,23E+00 | 0,000 | -1,15E+00 | 1,49E+00 |
| Hazardous waste for disposal [kg] | 1,71E-07 | 1,43E-07 | 2,22E-08 | 0,000 | 1,25E-09 | 4,53E-09 |
| Disposed of non-hazardous waste [kg] | 1,73E-01 | 4,09E-01 | 5,96E-02 | 0,000 | -3,09E-01 | 1,40E-02 |
| Disposed of radioactive waste [kg] | 1,38E-02 | 1,69E-03 | 1,24E-02 | 0,000 | -4,60E-04 | 1,17E-04 |

evaluated from CML 2001, April. 2015

### 1.3.25 Pipe shoe MP-PS L2-2 75-81 2-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330981 | Pipe shoe MP-PS L2-2 75-81 2-1/2" OC | 4 | 16,143 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 18,079 | 33,265 | 4,701 | 0,000 | -27,147 | 7,261 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,71E-12 | 8,58E-12 | 1,50E-13 | 0,000 | -2,44E-14 | 1,26E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 8,10E-02 | 7,71E-02 | 9,21E-03 | 0,000 | -6,30E-02 | 5,76E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,52E-02 | 8,10E-03 | 1,08E-03 | 0,000 | -5,83E-03 | 1,19E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,39E-02 | 1,11E-02 | 6,76E-04 | 0,000 | -9,65E-03 | -1,61E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,42E-06 | 4,29E-06 | 1,57E-06 | 0,000 | -4,86E-08 | 6,00E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,16E+02 | 2,97E+02 | 5,41E+01 | 0,000 | -2,33E+02 | 9,88E+01 |
| Energy (net calorific value) [MJ] | 2,52E+02 | 3,02E+02 | 8,55E+01 | 0,000 | -2,34E+02 | 9,91E+01 |
| Energy ren. (net calorafic value) [MJ] | 5,93E+01 | 2,44E+01 | 3,86E+01 | 0,000 | -8,69E+00 | 5,06E+00 |
| Water consumption [kg] | 1,00E+02 | 8,87E+01 | 3,79E+01 | 0,000 | -3,19E+01 | 5,81E+00 |
| Air pollution [$m^3$] | 1,33E+03 | 3,78E+03 | 2,97E+02 | 0,000 | -3,28E+03 | 5,32E+02 |
| Water pollution [$m^3$] | 3,55E+00 | 1,97E+00 | 1,23E+00 | 0,000 | -1,17E+00 | 1,52E+00 |
| Hazardous waste for disposal [kg] | 1,71E-07 | 1,43E-07 | 2,23E-08 | 0,000 | 1,30E-09 | 4,62E-09 |
| Disposed of non-hazardous waste [kg] | 1,75E-01 | 4,17E-01 | 5,97E-02 | 0,000 | -3,15E-01 | 1,43E-02 |
| Disposed of radioactive waste [kg] | 1,38E-02 | 1,73E-03 | 1,25E-02 | 0,000 | -4,62E-04 | 1,19E-04 |

evaluated from CML 2001, April. 2015

### 1.3.26 Pipe shoe MP-PS L2-2 88-94 3" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330982 | Pipe shoe MP-PS L2-2 88-94 3" OC | 2 | 11,054 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 12,404 | 23,072 | 2,456 | 0,000 | -18,094 | 4,970 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,57E-12 | 7,85E-14 | 0,000 | -1,77E-14 | 8,61E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 5,57E-02 | 5,39E-02 | 4,81E-03 | 0,000 | -4,24E-02 | 3,94E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,07E-02 | 5,93E-03 | 5,66E-04 | 0,000 | -3,91E-03 | 8,11E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -9,56E-03 | 7,58E-03 | 3,53E-04 | 0,000 | -6,50E-03 | -1,10E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,43E-06 | 4,25E-06 | 8,21E-07 | 0,000 | -4,66E-08 | 4,10E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,50E+02 | 2,13E+02 | 2,83E+01 | 0,000 | -1,58E+02 | 6,76E+01 |
| Energy (net calorific value) [MJ] | 1,70E+02 | 2,17E+02 | 4,47E+01 | 0,000 | -1,59E+02 | 6,78E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,78E+01 | 2,04E+01 | 2,02E+01 | 0,000 | -6,18E+00 | 3,45E+00 |
| Water consumption [kg] | 7,74E+01 | 7,46E+01 | 1,98E+01 | 0,000 | -2,11E+01 | 3,96E+00 |
| Air pollution [$m^3$] | 8,74E+02 | 2,57E+03 | 1,55E+02 | 0,000 | -2,21E+03 | 3,64E+02 |
| Water pollution [$m^3$] | 2,40E+00 | 1,52E+00 | 6,44E-01 | 0,000 | -7,99E-01 | 1,04E+00 |
| Hazardous waste for disposal [kg] | 1,59E-07 | 1,43E-07 | 1,16E-08 | 0,000 | 4,17E-10 | 3,15E-09 |
| Disposed of non-hazardous waste [kg] | 1,28E-01 | 2,94E-01 | 3,12E-02 | 0,000 | -2,06E-01 | 9,78E-03 |
| Disposed of radioactive waste [kg] | 7,45E-03 | 1,27E-03 | 6,51E-03 | 0,000 | -4,20E-04 | 8,17E-05 |

evaluated from CML 2001, April. 2015

### 1.3.27 Pipe shoe MP-PS L2-2 100-108 3-1/2" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330983 | Pipe shoe MP-PS L2-2 100-108 3-1/2" OC | 2 | 8,810 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,170 | 17,898 | 2,414 | 0,000 | -14,101 | 3,959 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,56E-12 | 7,71E-14 | 0,000 | -1,47E-14 | 6,87E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,56E-02 | 4,28E-02 | 4,73E-03 | 0,000 | -3,33E-02 | 3,14E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,78E-03 | 4,83E-03 | 5,57E-04 | 0,000 | -3,06E-03 | 6,45E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,47E-03 | 6,03E-03 | 3,47E-04 | 0,000 | -5,11E-03 | -8,74E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,26E-06 | 4,18E-06 | 8,08E-07 | 0,000 | -4,57E-08 | 3,26E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,22E+02 | 1,66E+02 | 2,78E+01 | 0,000 | -1,25E+02 | 5,39E+01 |
| Energy (net calorific value) [MJ] | 1,41E+02 | 1,70E+02 | 4,39E+01 | 0,000 | -1,26E+02 | 5,40E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,55E+01 | 1,81E+01 | 1,98E+01 | 0,000 | -5,08E+00 | 2,74E+00 |
| Water consumption [kg] | 7,81E+01 | 7,18E+01 | 1,95E+01 | 0,000 | -1,63E+01 | 3,15E+00 |
| Air pollution [$m^3$] | 7,45E+02 | 2,04E+03 | 1,52E+02 | 0,000 | -1,74E+03 | 2,90E+02 |
| Water pollution [$m^3$] | 2,09E+00 | 1,27E+00 | 6,33E-01 | 0,000 | -6,36E-01 | 8,24E-01 |
| Hazardous waste for disposal [kg] | 1,56E-07 | 1,42E-07 | 1,14E-08 | 0,000 | 2,68E-11 | 2,51E-09 |
| Disposed of non-hazardous waste [kg] | 1,13E-01 | 2,33E-01 | 3,07E-02 | 0,000 | -1,58E-01 | 7,78E-03 |
| Disposed of radioactive waste [kg] | 7,08E-03 | 1,01E-03 | 6,40E-03 | 0,000 | -4,01E-04 | 6,52E-05 |

evaluated from CML 2001, April. 2015

### 1.3.28 Pipe shoe MP-PS L2-2 110-118 4" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330984 | Pipe shoe MP-PS L2-2 110-118 4" OC | 2 | 8,990 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,349 | 18,311 | 2,418 | 0,000 | -14,420 | 4,040 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,56E-12 | 7,73E-14 | 0,000 | -1,50E-14 | 7,01E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,64E-02 | 4,37E-02 | 4,74E-03 | 0,000 | -3,40E-02 | 3,20E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 8,93E-03 | 4,92E-03 | 5,58E-04 | 0,000 | -3,13E-03 | 6,59E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,64E-03 | 6,15E-03 | 3,48E-04 | 0,000 | -5,22E-03 | -8,92E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,28E-06 | 4,18E-06 | 8,09E-07 | 0,000 | -4,58E-08 | 3,33E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,25E+02 | 1,70E+02 | 2,78E+01 | 0,000 | -1,28E+02 | 5,50E+01 |
| Energy (net calorific value) [MJ] | 1,43E+02 | 1,73E+02 | 4,40E+01 | 0,000 | -1,29E+02 | 5,51E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,57E+01 | 1,82E+01 | 1,98E+01 | 0,000 | -5,16E+00 | 2,80E+00 |
| Water consumption [kg] | 7,81E+01 | 7,20E+01 | 1,95E+01 | 0,000 | -1,67E+01 | 3,22E+00 |
| Air pollution [$m^3$] | 7,55E+02 | 2,08E+03 | 1,53E+02 | 0,000 | -1,78E+03 | 2,95E+02 |
| Water pollution [$m^3$] | 2,11E+00 | 1,29E+00 | 6,34E-01 | 0,000 | -6,49E-01 | 8,41E-01 |
| Hazardous waste for disposal [kg] | 1,56E-07 | 1,42E-07 | 1,15E-08 | 0,000 | 5,80E-11 | 2,56E-09 |
| Disposed of non-hazardous waste [kg] | 1,14E-01 | 2,37E-01 | 3,07E-02 | 0,000 | -1,62E-01 | 7,94E-03 |
| Disposed of radioactive waste [kg] | 7,11E-03 | 1,03E-03 | 6,41E-03 | 0,000 | -4,02E-04 | 6,65E-05 |

evaluated from CML 2001, April. 2015

### 1.3.29 Pipe shoe MP-PS L2-2 125-133 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330985 | Pipe shoe MP-PS L2-2 125-133 OC | 2 | 9,290 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,648 | 19,002 | 2,425 | 0,000 | -14,954 | 4,175 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,56E-12 | 7,75E-14 | 0,000 | -1,54E-14 | 7,24E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,78E-02 | 4,52E-02 | 4,75E-03 | 0,000 | -3,52E-02 | 3,31E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 9,19E-03 | 5,07E-03 | 5,59E-04 | 0,000 | -3,24E-03 | 6,81E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -7,92E-03 | 6,36E-03 | 3,49E-04 | 0,000 | -5,41E-03 | -9,22E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,30E-06 | 4,19E-06 | 8,11E-07 | 0,000 | -4,59E-08 | 3,44E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,28E+02 | 1,76E+02 | 2,79E+01 | 0,000 | -1,32E+02 | 5,68E+01 |
| Energy (net calorific value) [MJ] | 1,47E+02 | 1,80E+02 | 4,41E+01 | 0,000 | -1,33E+02 | 5,70E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,60E+01 | 1,86E+01 | 1,99E+01 | 0,000 | -5,31E+00 | 2,90E+00 |
| Water consumption [kg] | 7,80E+01 | 7,24E+01 | 1,96E+01 | 0,000 | -1,73E+01 | 3,32E+00 |
| Air pollution [$m^3$] | 7,73E+02 | 2,15E+03 | 1,53E+02 | 0,000 | -1,84E+03 | 3,05E+02 |
| Water pollution [$m^3$] | 2,16E+00 | 1,32E+00 | 6,35E-01 | 0,000 | -6,71E-01 | 8,69E-01 |
| Hazardous waste for disposal [kg] | 1,56E-07 | 1,42E-07 | 1,15E-08 | 0,000 | 1,10E-10 | 2,64E-09 |
| Disposed of non-hazardous waste [kg] | 1,16E-01 | 2,46E-01 | 3,08E-02 | 0,000 | -1,68E-01 | 8,21E-03 |
| Disposed of radioactive waste [kg] | 7,16E-03 | 1,07E-03 | 6,43E-03 | 0,000 | -4,05E-04 | 6,87E-05 |

evaluated from CML 2001, April. 2015

### 1.3.30 Pipe shoe MP-PS L2-2 136-144 5" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330986 | Pipe shoe MP-PS L2-2 136-144 5" OC | 2 | 9,515 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 10,872 | 19,520 | 2,430 | 0,000 | -15,354 | 4,276 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,56E-12 | 7,76E-14 | 0,000 | -1,57E-14 | 7,41E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 4,88E-02 | 4,63E-02 | 4,76E-03 | 0,000 | -3,61E-02 | 3,39E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 9,38E-03 | 5,18E-03 | 5,60E-04 | 0,000 | -3,33E-03 | 6,97E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,13E-03 | 6,51E-03 | 3,49E-04 | 0,000 | -5,55E-03 | -9,44E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,32E-06 | 4,20E-06 | 8,13E-07 | 0,000 | -4,60E-08 | 3,53E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,31E+02 | 1,81E+02 | 2,80E+01 | 0,000 | -1,36E+02 | 5,82E+01 |
| Energy (net calorific value) [MJ] | 1,50E+02 | 1,84E+02 | 4,42E+01 | 0,000 | -1,37E+02 | 5,84E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,63E+01 | 1,88E+01 | 1,99E+01 | 0,000 | -5,42E+00 | 2,97E+00 |
| Water consumption [kg] | 7,79E+01 | 7,27E+01 | 1,96E+01 | 0,000 | -1,78E+01 | 3,41E+00 |
| Air pollution [$m^3$] | 7,86E+02 | 2,21E+03 | 1,53E+02 | 0,000 | -1,89E+03 | 3,13E+02 |
| Water pollution [$m^3$] | 2,19E+00 | 1,35E+00 | 6,37E-01 | 0,000 | -6,88E-01 | 8,90E-01 |
| Hazardous waste for disposal [kg] | 1,57E-07 | 1,42E-07 | 1,15E-08 | 0,000 | 1,49E-10 | 2,71E-09 |
| Disposed of non-hazardous waste [kg] | 1,18E-01 | 2,52E-01 | 3,09E-02 | 0,000 | -1,73E-01 | 8,41E-03 |
| Disposed of radioactive waste [kg] | 7,20E-03 | 1,09E-03 | 6,44E-03 | 0,000 | -4,07E-04 | 7,04E-05 |

evaluated from CML 2001, April. 2015

### 1.3.31 Pipe shoe MP-PS L2-2 152-162 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330987 | Pipe shoe MP-PS L2-2 152-162 OC | 2 | 9,872 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 11,235 | 20,324 | 2,463 | 0,000 | -15,989 | 4,437 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,57E-12 | 7,87E-14 | 0,000 | -1,61E-14 | 7,69E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 5,04E-02 | 4,80E-02 | 4,83E-03 | 0,000 | -3,76E-02 | 3,52E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 9,69E-03 | 5,35E-03 | 5,68E-04 | 0,000 | -3,46E-03 | 7,24E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,45E-03 | 6,76E-03 | 3,54E-04 | 0,000 | -5,77E-03 | -9,80E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,35E-06 | 4,21E-06 | 8,24E-07 | 0,000 | -4,61E-08 | 3,66E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,36E+02 | 1,88E+02 | 2,83E+01 | 0,000 | -1,41E+02 | 6,04E+01 |
| Energy (net calorific value) [MJ] | 1,55E+02 | 1,92E+02 | 4,48E+01 | 0,000 | -1,42E+02 | 6,06E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,68E+01 | 1,91E+01 | 2,02E+01 | 0,000 | -5,60E+00 | 3,08E+00 |
| Water consumption [kg] | 7,81E+01 | 7,32E+01 | 1,99E+01 | 0,000 | -1,85E+01 | 3,53E+00 |
| Air pollution [$m^3$] | 8,08E+02 | 2,29E+03 | 1,55E+02 | 0,000 | -1,96E+03 | 3,25E+02 |
| Water pollution [$m^3$] | 2,24E+00 | 1,39E+00 | 6,45E-01 | 0,000 | -7,13E-01 | 9,24E-01 |
| Hazardous waste for disposal [kg] | 1,57E-07 | 1,43E-07 | 1,17E-08 | 0,000 | 2,12E-10 | 2,81E-09 |
| Disposed of non-hazardous waste [kg] | 1,20E-01 | 2,61E-01 | 3,13E-02 | 0,000 | -1,81E-01 | 8,73E-03 |
| Disposed of radioactive waste [kg] | 7,33E-03 | 1,13E-03 | 6,53E-03 | 0,000 | -4,10E-04 | 7,30E-05 |

evaluated from CML 2001, April. 2015

### 1.3.32 Pipe shoe MP-PS L2-2 163-173 6" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330988 | Pipe shoe MP-PS L2-2 163-173 6" OC | 2 | 10,098 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 11,460 | 20,845 | 2,468 | 0,000 | -16,392 | 4,539 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,63E-12 | 8,57E-12 | 7,89E-14 | 0,000 | -1,64E-14 | 7,87E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 5,14E-02 | 4,91E-02 | 4,84E-03 | 0,000 | -3,85E-02 | 3,60E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 9,88E-03 | 5,46E-03 | 5,69E-04 | 0,000 | -3,55E-03 | 7,40E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -8,66E-03 | 6,92E-03 | 3,55E-04 | 0,000 | -5,91E-03 | -1,00E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,37E-06 | 4,21E-06 | 8,25E-07 | 0,000 | -4,62E-08 | 3,74E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,38E+02 | 1,93E+02 | 2,84E+01 | 0,000 | -1,44E+02 | 6,18E+01 |
| Energy (net calorific value) [MJ] | 1,58E+02 | 1,96E+02 | 4,49E+01 | 0,000 | -1,45E+02 | 6,19E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,71E+01 | 1,94E+01 | 2,03E+01 | 0,000 | -5,71E+00 | 3,15E+00 |
| Water consumption [kg] | 7,80E+01 | 7,35E+01 | 1,99E+01 | 0,000 | -1,90E+01 | 3,62E+00 |
| Air pollution [$m^3$] | 8,21E+02 | 2,34E+03 | 1,56E+02 | 0,000 | -2,01E+03 | 3,32E+02 |
| Water pollution [$m^3$] | 2,28E+00 | 1,41E+00 | 6,47E-01 | 0,000 | -7,30E-01 | 9,45E-01 |
| Hazardous waste for disposal [kg] | 1,58E-07 | 1,43E-07 | 1,17E-08 | 0,000 | 2,51E-10 | 2,88E-09 |
| Disposed of non-hazardous waste [kg] | 1,22E-01 | 2,67E-01 | 3,14E-02 | 0,000 | -1,86E-01 | 8,93E-03 |
| Disposed of radioactive waste [kg] | 7,37E-03 | 1,16E-03 | 6,55E-03 | 0,000 | -4,12E-04 | 7,47E-05 |

evaluated from CML 2001, April. 2015

### 1.3.33 Pipe shoe MP-PS L2-2 192-202 7" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330989 | Pipe shoe MP-PS L2-2 192-202 7" OC | 2 | 12,768 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,121 | 26,996 | 2,527 | 0,000 | -21,143 | 5,741 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,64E-12 | 8,58E-12 | 8,07E-14 | 0,000 | -1,99E-14 | 9,94E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,35E-02 | 6,23E-02 | 4,95E-03 | 0,000 | -4,93E-02 | 4,55E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,22E-02 | 6,76E-03 | 5,83E-04 | 0,000 | -4,56E-03 | 9,38E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,11E-02 | 8,76E-03 | 3,63E-04 | 0,000 | -7,56E-03 | -1,27E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,57E-06 | 4,30E-06 | 8,45E-07 | 0,000 | -4,73E-08 | 4,74E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,71E+02 | 2,48E+02 | 2,91E+01 | 0,000 | -1,84E+02 | 7,81E+01 |
| Energy (net calorific value) [MJ] | 1,92E+02 | 2,52E+02 | 4,59E+01 | 0,000 | -1,85E+02 | 7,84E+01 |
| Energy ren. (net calorafic value) [MJ] | 3,98E+01 | 2,21E+01 | 2,07E+01 | 0,000 | -7,03E+00 | 3,99E+00 |
| Water consumption [kg] | 7,72E+01 | 7,70E+01 | 2,04E+01 | 0,000 | -2,47E+01 | 4,58E+00 |
| Air pollution [$m^3$] | 9,75E+02 | 2,97E+03 | 1,60E+02 | 0,000 | -2,57E+03 | 4,20E+02 |
| Water pollution [$m^3$] | 2,65E+00 | 1,71E+00 | 6,62E-01 | 0,000 | -9,24E-01 | 1,20E+00 |
| Hazardous waste for disposal [kg] | 1,61E-07 | 1,45E-07 | 1,20E-08 | 0,000 | 7,16E-10 | 3,64E-09 |
| Disposed of non-hazardous waste [kg] | 1,40E-01 | 3,40E-01 | 3,21E-02 | 0,000 | -2,43E-01 | 1,13E-02 |
| Disposed of radioactive waste [kg] | 7,83E-03 | 1,47E-03 | 6,70E-03 | 0,000 | -4,34E-04 | 9,44E-05 |

evaluated from CML 2001, April. 2015

### 1.3.34 Pipe shoe MP-PS L2-2 217-227 8" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330990 | Pipe shoe MP-PS L2-2 217-227 8" OC | 2 | 13,515 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 14,864 | 28,715 | 2,543 | 0,000 | -22,472 | 6,078 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,64E-12 | 8,58E-12 | 8,13E-14 | 0,000 | -2,09E-14 | 1,05E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 6,68E-02 | 6,60E-02 | 4,99E-03 | 0,000 | -5,23E-02 | 4,82E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,28E-02 | 7,13E-03 | 5,87E-04 | 0,000 | -4,84E-03 | 9,93E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,18E-02 | 9,27E-03 | 3,66E-04 | 0,000 | -8,02E-03 | -1,35E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,63E-06 | 4,32E-06 | 8,51E-07 | 0,000 | -4,76E-08 | 5,02E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,81E+02 | 2,63E+02 | 2,93E+01 | 0,000 | -1,95E+02 | 8,27E+01 |
| Energy (net calorific value) [MJ] | 2,01E+02 | 2,68E+02 | 4,62E+01 | 0,000 | -1,96E+02 | 8,29E+01 |
| Energy ren. (net calorafic value) [MJ] | 4,05E+01 | 2,28E+01 | 2,09E+01 | 0,000 | -7,39E+00 | 4,23E+00 |
| Water consumption [kg] | 7,70E+01 | 7,79E+01 | 2,05E+01 | 0,000 | -2,63E+01 | 4,85E+00 |
| Air pollution [$m^3$] | 1,02E+03 | 3,14E+03 | 1,61E+02 | 0,000 | -2,73E+03 | 4,45E+02 |
| Water pollution [$m^3$] | 2,76E+00 | 1,80E+00 | 6,67E-01 | 0,000 | -9,78E-01 | 1,27E+00 |
| Hazardous waste for disposal [kg] | 1,62E-07 | 1,45E-07 | 1,20E-08 | 0,000 | 8,46E-10 | 3,86E-09 |
| Disposed of non-hazardous waste [kg] | 1,45E-01 | 3,60E-01 | 3,23E-02 | 0,000 | -2,59E-01 | 1,20E-02 |
| Disposed of radioactive waste [kg] | 7,96E-03 | 1,56E-03 | 6,75E-03 | 0,000 | -4,40E-04 | 9,99E-05 |

evaluated from CML 2001, April. 2015

### 1.3.35 Pipe shoe MP-PS L2-2 244-254 OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330991 | Pipe shoe MP-PS L2-2 244-254 OC | 2 | 15,242 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 16,667 | 32,487 | 2,870 | 0,000 | -25,545 | 6,855 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,65E-12 | 8,58E-12 | 9,17E-14 | 0,000 | -2,32E-14 | 1,19E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,49E-02 | 7,42E-02 | 5,63E-03 | 0,000 | -5,93E-02 | 5,44E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,43E-02 | 7,93E-03 | 6,62E-04 | 0,000 | -5,49E-03 | 1,12E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,34E-02 | 1,05E-02 | 4,13E-04 | 0,000 | -9,09E-03 | -1,52E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,84E-06 | 4,36E-06 | 9,60E-07 | 0,000 | -4,83E-08 | 5,66E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,02E+02 | 2,96E+02 | 3,30E+01 | 0,000 | -2,20E+02 | 9,33E+01 |
| Energy (net calorific value) [MJ] | 2,26E+02 | 3,01E+02 | 5,22E+01 | 0,000 | -2,21E+02 | 9,36E+01 |
| Energy ren. (net calorafic value) [MJ] | 4,45E+01 | 2,44E+01 | 2,36E+01 | 0,000 | -8,24E+00 | 4,78E+00 |
| Water consumption [kg] | 7,98E+01 | 8,12E+01 | 2,32E+01 | 0,000 | -3,00E+01 | 5,48E+00 |
| Air pollution [$m^3$] | 1,14E+03 | 3,55E+03 | 1,81E+02 | 0,000 | -3,09E+03 | 5,02E+02 |
| Water pollution [$m^3$] | 3,06E+00 | 1,98E+00 | 7,52E-01 | 0,000 | -1,10E+00 | 1,43E+00 |
| Hazardous waste for disposal [kg] | 1,65E-07 | 1,46E-07 | 1,36E-08 | 0,000 | 1,15E-09 | 4,36E-09 |
| Disposed of non-hazardous waste [kg] | 1,59E-01 | 4,05E-01 | 3,65E-02 | 0,000 | -2,96E-01 | 1,35E-02 |
| Disposed of radioactive waste [kg] | 9,01E-03 | 1,74E-03 | 7,61E-03 | 0,000 | -4,55E-04 | 1,13E-04 |

evaluated from CML 2001, April. 2015

### 1.3.36 Pipe shoe MP-PS L2-2 267-277 10" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330992 | Pipe shoe MP-PS L2-2 267-277 10" OC | 2 | 15,914 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 17,337 | 34,036 | 2,884 | 0,000 | -26,741 | 7,158 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,66E-12 | 8,59E-12 | 9,22E-14 | 0,000 | -2,41E-14 | 1,24E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 7,80E-02 | 7,75E-02 | 5,66E-03 | 0,000 | -6,20E-02 | 5,68E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,49E-02 | 8,26E-03 | 6,65E-04 | 0,000 | -5,75E-03 | 1,17E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,40E-02 | 1,09E-02 | 4,15E-04 | 0,000 | -9,51E-03 | -1,59E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 5,89E-06 | 4,38E-06 | 9,65E-07 | 0,000 | -4,85E-08 | 5,92E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,11E+02 | 3,10E+02 | 3,32E+01 | 0,000 | -2,30E+02 | 9,74E+01 |
| Energy (net calorific value) [MJ] | 2,35E+02 | 3,15E+02 | 5,25E+01 | 0,000 | -2,31E+02 | 9,77E+01 |
| Energy ren. (net calorafic value) [MJ] | 4,52E+01 | 2,51E+01 | 2,37E+01 | 0,000 | -8,58E+00 | 4,99E+00 |
| Water consumption [kg] | 7,96E+01 | 8,20E+01 | 2,33E+01 | 0,000 | -3,15E+01 | 5,72E+00 |
| Air pollution [$m^3$] | 1,18E+03 | 3,70E+03 | 1,82E+02 | 0,000 | -3,23E+03 | 5,24E+02 |
| Water pollution [$m^3$] | 3,15E+00 | 2,05E+00 | 7,56E-01 | 0,000 | -1,15E+00 | 1,49E+00 |
| Hazardous waste for disposal [kg] | 1,66E-07 | 1,46E-07 | 1,37E-08 | 0,000 | 1,26E-09 | 4,55E-09 |
| Disposed of non-hazardous waste [kg] | 1,63E-01 | 4,23E-01 | 3,67E-02 | 0,000 | -3,11E-01 | 1,41E-02 |
| Disposed of radioactive waste [kg] | 9,13E-03 | 1,82E-03 | 7,65E-03 | 0,000 | -4,60E-04 | 1,18E-04 |

evaluated from CML 2001, April. 2015

### 1.3.37 Pipe shoe MP-PS L2-2 318-328 12" OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330993 | Pipe shoe MP-PS L2-2 318-328 12" OC | 2 | 17,405 | Steel, Polymer, Cardboard |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 18,822 | 37,469 | 2,917 | 0,000 | -29,394 | 7,829 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 8,66E-12 | 8,59E-12 | 9,32E-14 | 0,000 | -2,60E-14 | 1,36E-15 |
| Acidification Potential (AP) [kg SO2-eq.] | 8,47E-02 | 8,49E-02 | 5,72E-03 | 0,000 | -6,81E-02 | 6,21E-02 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,61E-02 | 8,99E-03 | 6,73E-04 | 0,000 | -6,31E-03 | 1,28E-02 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,54E-02 | 1,20E-02 | 4,20E-04 | 0,000 | -1,04E-02 | -1,74E-02 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 6,00E-06 | 4,43E-06 | 9,76E-07 | 0,000 | -4,91E-08 | 6,47E-07 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,29E+02 | 3,41E+02 | 3,36E+01 | 0,000 | -2,52E+02 | 1,07E+02 |
| Energy (net calorific value) [MJ] | 2,54E+02 | 3,47E+02 | 5,31E+01 | 0,000 | -2,53E+02 | 1,07E+02 |
| Energy ren. (net calorafic value) [MJ] | 4,67E+01 | 2,66E+01 | 2,39E+01 | 0,000 | -9,31E+00 | 5,46E+00 |
| Water consumption [kg] | 7,91E+01 | 8,39E+01 | 2,36E+01 | 0,000 | -3,46E+01 | 6,26E+00 |
| Air pollution [$m^3$] | 1,26E+03 | 4,05E+03 | 1,84E+02 | 0,000 | -3,54E+03 | 5,73E+02 |
| Water pollution [$m^3$] | 3,36E+00 | 2,22E+00 | 7,65E-01 | 0,000 | -1,26E+00 | 1,64E+00 |
| Hazardous waste for disposal [kg] | 1,68E-07 | 1,47E-07 | 1,38E-08 | 0,000 | 1,52E-09 | 4,98E-09 |
| Disposed of non-hazardous waste [kg] | 1,74E-01 | 4,64E-01 | 3,71E-02 | 0,000 | -3,43E-01 | 1,54E-02 |
| Disposed of radioactive waste [kg] | 9,39E-03 | 1,99E-03 | 7,74E-03 | 0,000 | -4,73E-04 | 1,29E-04 |

evaluated from CML 2001, April. 2015

### 1.3.38 Connector Pipe shoe MT-FPS-FF OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331076 | Connector Pipe shoe MT-FPS-FF OC set | 8 | 2,229 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,568 | 4,511 | 0,918 | 0,000 | -3,864 | 1,004 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,16E-14 | 5,62E-15 | 2,93E-14 | 0,000 | -3,41E-15 | 1,73E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,10E-02 | 1,02E-02 | 1,80E-03 | 0,000 | -8,95E-03 | 7,99E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,98E-03 | 9,58E-04 | 2,12E-04 | 0,000 | -8,36E-04 | 1,65E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,92E-03 | 1,56E-03 | 1,32E-04 | 0,000 | -1,37E-03 | -2,24E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,16E-07 | 3,41E-08 | 3,07E-07 | 0,000 | -7,88E-09 | 8,31E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,04E+01 | 3,92E+01 | 1,06E+01 | 0,000 | -3,30E+01 | 1,37E+01 |
| Energy (net calorific value) [MJ] | 3,69E+01 | 3,97E+01 | 1,67E+01 | 0,000 | -3,32E+01 | 1,37E+01 |
| Energy ren. (net calorafic value) [MJ] | 8,82E+00 | 1,82E+00 | 7,52E+00 | 0,000 | -1,22E+00 | 7,04E-01 |
| Water consumption [kg] | 9,61E+00 | 6,04E+00 | 7,43E+00 | 0,000 | -4,66E+00 | 8,08E-01 |
| Air pollution [$m^3$] | 1,94E+02 | 5,26E+02 | 5,80E+01 | 0,000 | -4,64E+02 | 7,36E+01 |
| Water pollution [$m^3$] | 4,94E-01 | 2,08E-01 | 2,40E-01 | 0,000 | -1,65E-01 | 2,11E-01 |
| Hazardous waste for disposal [kg] | 1,38E-08 | 8,36E-10 | 4,40E-09 | 0,000 | 7,42E-11 | 8,48E-09 |
| Disposed of non-hazardous waste [kg] | 2,08E-02 | 5,42E-02 | 1,17E-02 | 0,000 | -4,71E-02 | 1,98E-03 |
| Disposed of radioactive waste [kg] | 2,59E-03 | 2,11E-04 | 2,43E-03 | 0,000 | -6,68E-05 | 1,65E-05 |

evaluated from CML 2001, April. 2015

### 1.3.39 Connector Pipe shoe MT-FPS-FZL OC

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331077 | Connector Pipe shoe MT-FPS-FZL OC | 2 | 1,197 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 1,426 | 2,417 | 0,497 | 0,000 | -2,027 | 0,539 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 1,69E-14 | 3,08E-15 | 1,58E-14 | 0,000 | -2,05E-15 | 9,29E-17 |
| Acidification Potential (AP) [kg SO2-eq.] | 5,95E-03 | 5,46E-03 | 9,77E-04 | 0,000 | -4,77E-03 | 4,29E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,07E-03 | 5,13E-04 | 1,15E-04 | 0,000 | -4,45E-04 | 8,84E-04 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,02E-03 | 8,33E-04 | 7,16E-05 | 0,000 | -7,27E-04 | -1,20E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 2,26E-07 | 2,30E-08 | 1,66E-07 | 0,000 | -7,46E-09 | 4,46E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 1,70E+01 | 2,17E+01 | 5,71E+00 | 0,000 | -1,78E+01 | 7,33E+00 |
| Energy (net calorific value) [MJ] | 2,05E+01 | 2,20E+01 | 9,03E+00 | 0,000 | -1,80E+01 | 7,35E+00 |
| Energy ren. (net calorafic value) [MJ] | 4,72E+00 | 9,85E-01 | 4,07E+00 | 0,000 | -7,15E-01 | 3,78E-01 |
| Water consumption [kg] | 5,33E+00 | 3,31E+00 | 4,04E+00 | 0,000 | -2,46E+00 | 4,34E-01 |
| Air pollution [$m^3$] | 1,05E+02 | 2,81E+02 | 3,14E+01 | 0,000 | -2,47E+02 | 3,95E+01 |
| Water pollution [$m^3$] | 2,69E-01 | 1,16E-01 | 1,30E-01 | 0,000 | -9,03E-02 | 1,13E-01 |
| Hazardous waste for disposal [kg] | 1,14E-08 | 8,87E-10 | 2,41E-09 | 0,000 | -1,05E-10 | 8,18E-09 |
| Disposed of non-hazardous waste [kg] | 1,14E-02 | 2,90E-02 | 6,32E-03 | 0,000 | -2,50E-02 | 1,06E-03 |
| Disposed of radioactive waste [kg] | 1,39E-03 | 1,17E-04 | 1,32E-03 | 0,000 | -5,82E-05 | 8,84E-06 |

evaluated from CML 2001, April. 2015

### 1.3.40 Connector Pipe shoe MT-FPS-SZ1 OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331078 | Connector Pipe shoe MT-FPS-SZ1 OC set | 12 | 2,137 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,466 | 4,324 | 0,880 | 0,000 | -3,700 | 0,962 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,03E-14 | 5,39E-15 | 2,81E-14 | 0,000 | -3,29E-15 | 1,66E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,06E-02 | 9,79E-03 | 1,73E-03 | 0,000 | -8,58E-03 | 7,66E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,90E-03 | 9,18E-04 | 2,03E-04 | 0,000 | -8,01E-04 | 1,58E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,84E-03 | 1,49E-03 | 1,27E-04 | 0,000 | -1,31E-03 | -2,14E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 3,99E-07 | 3,31E-08 | 2,94E-07 | 0,000 | -7,84E-09 | 7,97E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 2,92E+01 | 3,76E+01 | 1,01E+01 | 0,000 | -3,16E+01 | 1,31E+01 |
| Energy (net calorific value) [MJ] | 3,54E+01 | 3,81E+01 | 1,60E+01 | 0,000 | -3,18E+01 | 1,31E+01 |
| Energy ren. (net calorafic value) [MJ] | 8,45E+00 | 1,74E+00 | 7,21E+00 | 0,000 | -1,18E+00 | 6,75E-01 |
| Water consumption [kg] | 9,23E+00 | 5,80E+00 | 7,13E+00 | 0,000 | -4,47E+00 | 7,74E-01 |
| Air pollution [$m^3$] | 1,86E+02 | 5,05E+02 | 5,56E+01 | 0,000 | -4,44E+02 | 7,06E+01 |
| Water pollution [$m^3$] | 4,74E-01 | 2,00E-01 | 2,31E-01 | 0,000 | -1,59E-01 | 2,02E-01 |
| Hazardous waste for disposal [kg] | 1,36E-08 | 8,40E-10 | 4,23E-09 | 0,000 | 5,82E-11 | 8,45E-09 |
| Disposed of non-hazardous waste [kg] | 1,99E-02 | 5,20E-02 | 1,12E-02 | 0,000 | -4,52E-02 | 1,90E-03 |
| Disposed of radioactive waste [kg] | 2,49E-03 | 2,03E-04 | 2,33E-03 | 0,000 | -6,61E-05 | 1,58E-05 |

evaluated from CML 2001, April. 2015

### 1.3.41 Connector Pipe shoe MT-FPS-GL1 OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331080 | Connector Pipe shoe MT-FPS-GL1 OC set | 12 | 2,212 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,549 | 4,475 | 0,910 | 0,000 | -3,833 | 0,996 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,14E-14 | 5,58E-15 | 2,90E-14 | 0,000 | -3,39E-15 | 1,72E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,10E-02 | 1,01E-02 | 1,79E-03 | 0,000 | -8,88E-03 | 7,92E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3-}$ eq.] | 1,96E-03 | 9,50E-04 | 2,10E-04 | 0,000 | -8,29E-04 | 1,63E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,90E-03 | 1,54E-03 | 1,31E-04 | 0,000 | -1,36E-03 | -2,22E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,13E-07 | 3,39E-08 | 3,04E-07 | 0,000 | -7,87E-09 | 8,25E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,01E+01 | 3,89E+01 | 1,05E+01 | 0,000 | -3,27E+01 | 1,36E+01 |
| Energy (net calorific value) [MJ] | 3,66E+01 | 3,94E+01 | 1,66E+01 | 0,000 | -3,29E+01 | 1,36E+01 |
| Energy ren. (net calorafic value) [MJ] | 8,75E+00 | 1,80E+00 | 7,46E+00 | 0,000 | -1,22E+00 | 6,98E-01 |
| Water consumption [kg] | 9,54E+00 | 5,99E+00 | 7,37E+00 | 0,000 | -4,62E+00 | 8,01E-01 |
| Air pollution [$m^3$] | 1,93E+02 | 5,22E+02 | 5,75E+01 | 0,000 | -4,60E+02 | 7,30E+01 |
| Water pollution [$m^3$] | 4,90E-01 | 2,07E-01 | 2,38E-01 | 0,000 | -1,64E-01 | 2,09E-01 |
| Hazardous waste for disposal [kg] | 1,38E-08 | 8,36E-10 | 4,37E-09 | 0,000 | 7,12E-11 | 8,47E-09 |
| Disposed of non-hazardous waste [kg] | 2,06E-02 | 5,38E-02 | 1,16E-02 | 0,000 | -4,68E-02 | 1,97E-03 |
| Disposed of radioactive waste [kg] | 2,57E-03 | 2,10E-04 | 2,41E-03 | 0,000 | -6,67E-05 | 1,63E-05 |

evaluated from CML 2001, April. 2015

### 1.3.42 Connector Pipe shoe MT-FPS-SZ2 OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331079 | Connector Pipe shoe MT-FPS-SZ2 OC set | 10 | 2,573 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,948 | 5,208 | 1,058 | 0,000 | -4,476 | 1,159 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,65E-14 | 6,47E-15 | 3,37E-14 | 0,000 | -3,86E-15 | 2,00E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,27E-02 | 1,18E-02 | 2,08E-03 | 0,000 | -1,03E-02 | 9,22E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 2,28E-03 | 1,11E-03 | 2,44E-04 | 0,000 | -9,65E-04 | 1,90E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -2,21E-03 | 1,80E-03 | 1,52E-04 | 0,000 | -1,58E-03 | -2,58E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,79E-07 | 3,77E-08 | 3,54E-07 | 0,000 | -8,02E-09 | 9,60E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,48E+01 | 4,50E+01 | 1,22E+01 | 0,000 | -3,81E+01 | 1,58E+01 |
| Energy (net calorific value) [MJ] | 4,24E+01 | 4,56E+01 | 1,92E+01 | 0,000 | -3,82E+01 | 1,58E+01 |
| Energy ren. (net calorafic value) [MJ] | 1,02E+01 | 2,09E+00 | 8,67E+00 | 0,000 | -1,39E+00 | 8,12E-01 |
| Water consumption [kg] | 1,10E+01 | 6,95E+00 | 8,56E+00 | 0,000 | -5,40E+00 | 9,32E-01 |
| Air pollution [$m^3$] | 2,24E+02 | 6,08E+02 | 6,68E+01 | 0,000 | -5,36E+02 | 8,50E+01 |
| Water pollution [$m^3$] | 5,69E-01 | 2,39E-01 | 2,77E-01 | 0,000 | -1,90E-01 | 2,43E-01 |
| Hazardous waste for disposal [kg] | 1,46E-08 | 8,18E-10 | 5,07E-09 | 0,000 | 1,34E-10 | 8,58E-09 |
| Disposed of non-hazardous waste [kg] | 2,39E-02 | 6,27E-02 | 1,34E-02 | 0,000 | -5,45E-02 | 2,29E-03 |
| Disposed of radioactive waste [kg] | 3,00E-03 | 2,43E-04 | 2,80E-03 | 0,000 | -6,97E-05 | 1,90E-05 |

evaluated from CML 2001, April. 2015

### 1.3.43 Connector Pipe shoe MT-FPS-GL2 OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2331081 | Connector Pipe shoe MT-FPS-GL2 OC set | 10 | 2,547 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,920 | 5,155 | 1,047 | 0,000 | -4,430 | 1,147 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,62E-14 | 6,40E-15 | 3,34E-14 | 0,000 | -3,83E-15 | 1,98E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,26E-02 | 1,17E-02 | 2,05E-03 | 0,000 | -1,02E-02 | 9,12E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 2,26E-03 | 1,09E-03 | 2,41E-04 | 0,000 | -9,56E-04 | 1,88E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -2,19E-03 | 1,78E-03 | 1,51E-04 | 0,000 | -1,56E-03 | -2,56E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,75E-07 | 3,75E-08 | 3,50E-07 | 0,000 | -8,01E-09 | 9,50E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,45E+01 | 4,45E+01 | 1,20E+01 | 0,000 | -3,77E+01 | 1,56E+01 |
| Energy (net calorific value) [MJ] | 4,20E+01 | 4,51E+01 | 1,90E+01 | 0,000 | -3,79E+01 | 1,57E+01 |
| Energy ren. (net calorafic value) [MJ] | 1,01E+01 | 2,07E+00 | 8,58E+00 | 0,000 | -1,38E+00 | 8,04E-01 |
| Water consumption [kg] | 1,09E+01 | 6,88E+00 | 8,47E+00 | 0,000 | -5,34E+00 | 9,23E-01 |
| Air pollution [$m^3$] | 2,22E+02 | 6,02E+02 | 6,62E+01 | 0,000 | -5,31E+02 | 8,41E+01 |
| Water pollution [$m^3$] | 5,63E-01 | 2,37E-01 | 2,74E-01 | 0,000 | -1,88E-01 | 2,41E-01 |
| Hazardous waste for disposal [kg] | 1,45E-08 | 8,20E-10 | 5,02E-09 | 0,000 | 1,30E-10 | 8,57E-09 |
| Disposed of non-hazardous waste [kg] | 2,36E-02 | 6,20E-02 | 1,33E-02 | 0,000 | -5,39E-02 | 2,26E-03 |
| Disposed of radioactive waste [kg] | 2,97E-03 | 2,40E-04 | 2,78E-03 | 0,000 | -6,95E-05 | 1,88E-05 |

evaluated from CML 2001, April. 2015

### 1.3.44 Connector Pipe shoe MT-FPS-SF OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330920 | Connector Pipe shoe MT-FPS-SF OC set | 8 | 2,211 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,548 | 4,473 | 0,910 | 0,000 | -3,831 | 0,995 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,14E-14 | 5,57E-15 | 2,90E-14 | 0,000 | -3,39E-15 | 1,72E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,10E-02 | 1,01E-02 | 1,79E-03 | 0,000 | -8,88E-03 | 7,92E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3}$- eq.] | 1,96E-03 | 9,50E-04 | 2,10E-04 | 0,000 | -8,29E-04 | 1,63E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -1,90E-03 | 1,54E-03 | 1,31E-04 | 0,000 | -1,36E-03 | -2,22E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,13E-07 | 3,39E-08 | 3,04E-07 | 0,000 | -7,87E-09 | 8,25E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,01E+01 | 3,88E+01 | 1,05E+01 | 0,000 | -3,27E+01 | 1,35E+01 |
| Energy (net calorific value) [MJ] | 3,66E+01 | 3,94E+01 | 1,65E+01 | 0,000 | -3,29E+01 | 1,36E+01 |
| Energy ren. (net calorafic value) [MJ] | 8,74E+00 | 1,80E+00 | 7,46E+00 | 0,000 | -1,22E+00 | 6,98E-01 |
| Water consumption [kg] | 9,54E+00 | 5,99E+00 | 7,37E+00 | 0,000 | -4,62E+00 | 8,01E-01 |
| Air pollution [$m^3$] | 1,93E+02 | 5,22E+02 | 5,75E+01 | 0,000 | -4,60E+02 | 7,30E+01 |
| Water pollution [$m^3$] | 4,90E-01 | 2,07E-01 | 2,38E-01 | 0,000 | -1,64E-01 | 2,09E-01 |
| Hazardous waste for disposal [kg] | 1,37E-08 | 8,37E-10 | 4,37E-09 | 0,000 | 7,10E-11 | 8,47E-09 |
| Disposed of non-hazardous waste [kg] | 2,06E-02 | 5,38E-02 | 1,16E-02 | 0,000 | -4,67E-02 | 1,96E-03 |
| Disposed of radioactive waste [kg] | 2,57E-03 | 2,10E-04 | 2,41E-03 | 0,000 | -6,67E-05 | 1,63E-05 |

evaluated from CML 2001, April. 2015

### 1.3.45 Connector Pipe shoe MT-FPS-GF OC set

| IT- Number | Product name | Pcs. per Sales pack | Weight [kg] | Material |
|---|---|---|---|---|
| 2330921 | Connector Pipe shoe MT-FPS-GF OC set | 8 | 2,412 | Steel, Polymer |

| Environmental impact category | Total | Raw material | Produc-tion | Use | End of life | Transpor-tation |
|---|---|---|---|---|---|---|
| Global Warming Potential (GWP 100 years) [kg CO2-eq.] | 2,771 | 4,882 | 0,992 | 0,000 | -4,190 | 1,086 |
| Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.] | 3,42E-14 | 6,07E-15 | 3,16E-14 | 0,000 | -3,65E-15 | 1,88E-16 |
| Acidification Potential (AP) [kg SO2-eq.] | 1,20E-02 | 1,11E-02 | 1,95E-03 | 0,000 | -9,69E-03 | 8,64E-03 |
| Eutrification Potential (EP) [kg $(PO4)^{3-}$ eq.] | 2,14E-03 | 1,04E-03 | 2,29E-04 | 0,000 | -9,05E-04 | 1,78E-03 |
| Photochemical Oxidant Potential (POCP) [kg Ethene-eq.] | -2,07E-03 | 1,68E-03 | 1,43E-04 | 0,000 | -1,48E-03 | -2,42E-03 |
| Abiotic Depletion Potential non-Fossil Resources (ADPE) [kg Sb-eq.] | 4,50E-07 | 3,60E-08 | 3,32E-07 | 0,000 | -7,95E-09 | 9,00E-08 |
| Abiotic Depletion Potential Fossil Fuels (ADPF) [MJ] | 3,27E+01 | 4,22E+01 | 1,14E+01 | 0,000 | -3,57E+01 | 1,48E+01 |
| Energy (net calorific value) [MJ] | 3,98E+01 | 4,28E+01 | 1,80E+01 | 0,000 | -3,59E+01 | 1,48E+01 |
| Energy ren. (net calorafic value) [MJ] | 9,54E+00 | 1,96E+00 | 8,13E+00 | 0,000 | -1,31E+00 | 7,62E-01 |
| Water consumption [kg] | 1,04E+01 | 6,52E+00 | 8,03E+00 | 0,000 | -5,05E+00 | 8,74E-01 |
| Air pollution [$m^3$] | 2,10E+02 | 5,70E+02 | 6,27E+01 | 0,000 | -5,02E+02 | 7,97E+01 |
| Water pollution [$m^3$] | 5,34E-01 | 2,25E-01 | 2,60E-01 | 0,000 | -1,78E-01 | 2,28E-01 |
| Hazardous waste for disposal [kg] | 1,42E-08 | 8,26E-10 | 4,76E-09 | 0,000 | 1,06E-10 | 8,53E-09 |
| Disposed of non-hazardous waste [kg] | 2,24E-02 | 5,87E-02 | 1,26E-02 | 0,000 | -5,11E-02 | 2,14E-03 |
| Disposed of radioactive waste [kg] | 2,81E-03 | 2,28E-04 | 2,63E-03 | 0,000 | -6,84E-05 | 1,78E-05 |

evaluated from CML 2001, April. 2015