

| Flow | Input (white)/ output (grey) | Category | Amount | Unit | Provider |
|-----------------------|---|--|--------|------|---|
| Green case plus valve | polyethylene, high density, granulate | Original ecoinvent database/C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 16.22 | g | market for polyethylene, high density, granulate polyethylene, high density, granulate Cutoff, U - GLO |
| | injection moulding | Original ecoinvent database/C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 16.22 | g | market for injection moulding injection moulding Cutoff, U - GLO |
| | paper, woodfree, uncoated | C:Manufacturing/17:Manufacture of paper and paper products/170:Manufacture of paper and paper products/1701:Manufacture of pulp, paper and paperboard | 0.67 | g | market for paper, woodfree, uncoated paper, woodfree, uncoated Cutoff, U - RoW |
| | Green case plus valve hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 16.89 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Wick | Wick - textile, non-woven polypropylene | Original ecoinvent database/C:Manufacturing/13:Manufacture of textiles/131:Spinning, weaving and finishing of textiles/1311:Preparation and spinning of textile fibres | 3.52 | g | market for textile, nonwoven polypropylene textile, nonwoven polypropylene Cutoff, U - GLO |
| | Wick - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 3.52 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Glass brown vial | glass tube, borosilicate | Original ecoinvent database/C:Manufacturing/23:Manufacture of other non-metallic mineral products/231:Manufacture of glass | 7 | g | market for glass tube, borosilicate glass tube, |

| | | | | | |
|-------------------------------|--|---|------------|-----|---|
| | | and glass products/2310:Manufacture of glass and glass products | | | borosilicate Cutoff, U - GLO |
| | Brown Glass vial label - paper, woodfree, uncoated | C:Manufacturing/17:Manufacture of paper and paper products/170:Manufacture of paper and paper products/1701:Manufacture of pulp, paper and paperboard | 0.11 | g | market for paper, woodfree, uncoated paper, woodfree, uncoated Cutoff, U - RoW |
| | Glass vial + label - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 7.11 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| | electricity, medium voltage solar - filling | Original ecoinvent database/D:Electricity, gas, steam and air conditioning supply/35:Electricity, gas, steam and air conditioning supply/351:Electric power generation, transmission and distribution/3510:Electric power generation, transmission and distribution | 212.8/1000 | kWh | market for electricity, medium voltage electricity, medium voltage Cutoff, U - AU |
| | electricity, medium voltage solar - capping | Original ecoinvent database/D:Electricity, gas, steam and air conditioning supply/35:Electricity, gas, steam and air conditioning supply/351:Electric power generation, transmission and distribution/3510:Electric power generation, transmission and distribution | 7.5/5400 | kWh | market for electricity, medium voltage electricity, medium voltage Cutoff, U - AU |
| Plastic vial lid white | vial lid - injection moulding | Original ecoinvent database/C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 1.2 | g | injection moulding injection moulding Cutoff, U - RoW |
| | vial lid - urea formaldehyde resin (should this not be polyoxymethylene??) | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms/2013:Manufacture of plastics and synthetic rubber in primary forms | 1.2 | g | market for urea formaldehyde resin urea formaldehyde resin Cutoff, U - RoW |

| | | | | | |
|--|--|--|-------|---|---|
| | vial lid - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 1.2 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Fabric white tie to hand hold (wrist strap) | Fabric white tie to hand hold (wrist strap) - textile, non-woven polyester | Original ecoinvent database/C:Manufacturing/13:Manufacture of textiles/131:Spinning, weaving and finishing of textiles/1311:Preparation and spinning of textile fibres | 0.567 | g | market for textile, nonwoven polyester textile, nonwoven polyester Cutoff, U - GLO |
| | Fabric white tie to hand hold - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 0.567 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Charcoal | charcoal | A:Agriculture, forestry and fishing/02:Forestry and logging/022:Logging/0220:Logging | 7 | g | market for charcoal charcoal Cutoff, U - GLO |
| | Charcoal - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 7 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - RoW |
| Charcoal filter | Charcoal filter - textile, non-woven polyester | Original ecoinvent database/C:Manufacturing/13:Manufacture of textiles/131:Spinning, weaving and finishing of textiles/1311:Preparation and spinning of textile fibres | 0.034 | g | market for textile, nonwoven polyester textile, nonwoven polyester Cutoff, U - GLO |
| | hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 0.034 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |

| | | disposal/3822:Treatment and disposal of hazardous waste | | | |
|---|--|--|----|---|--|
| Cardboard box | carton board box production, with offset printing | Original ecoinvent database/C:Manufacturing/17:Manufacture of paper and paper products/170:Manufacture of paper and paper products/1702:Manufacture of corrugated paper and paperboard and of containers of paper a | 16 | g | market for carton board box production, with offset printing carton board box production, with offset printing Cutoff, U - GLO |
| | Cardboard box - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 16 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Paper instructions (instructions) | Paper instructions - paper, woodfree, uncoated | C:Manufacturing/17:Manufacture of paper and paper products/170:Manufacture of paper and paper products/1701:Manufacture of pulp, paper and paperboard | 11 | g | market for paper, woodfree, uncoated paper, woodfree, uncoated Cutoff, U - RoW |
| | Paper instructions - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 11 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Card information alert for patients (alert card) | Paper alert card - paper, woodfree, uncoated | C:Manufacturing/17:Manufacture of paper and paper products/170:Manufacture of paper and paper products/1701:Manufacture of pulp, paper and paperboard | 4 | g | market for paper, woodfree, uncoated paper, woodfree, uncoated Cutoff, U - RoW |
| | Paper alert card - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 4 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |

| | | | | | |
|--|---|---|------|---|---|
| Supplied waste bag (disposal bag) | Supplied waste bag - extrusion | C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 2 | g | market for extrusion, plastic pipes extrusion, plastic pipes Cutoff, U - GLO manufacture of mask to tubing plastic connectors (pack 100) |
| | Supplied waste bag - packaging film, low density polyethylene | Original ecoinvent database/C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 2 | g | market for packaging film, low density polyethylene packaging film, low density polyethylene Cutoff, U - GLO manufacture of plastic bag mask to tubing plastic connectors (pack 100) |
| | Supplied waste bag - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste treatment and disposal/3822:Treatment and disposal of hazardous waste | 2 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, U - Europe without Switzerland |
| Charcoal filter case | Charcoal case - injection moulding | Original ecoinvent database/C:Manufacturing/22:Manufacture of rubber and plastics products/222:Manufacture of plastics products/2220:Manufacture of plastics products | 19.4 | g | injection moulding injection moulding Cutoff, U - RER |
| | Charcoal case - polycarbonate | Original ecoinvent database/C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms/2013:Manufacture of plastics and synthetic rubber in primary forms | 19.4 | g | market for polycarbonate polycarbonate Cutoff, U - GLO |
| | Charcoal case - hazardous waste, for incineration | Original ecoinvent database/E:Water supply; sewerage, waste management and remediation activities/38:Waste collection, treatment and disposal activities; materials recovery/382:Waste | 19.4 | g | market for hazardous waste, for incineration hazardous waste, for incineration Cutoff, |

| | | treatment and disposal/3822:Treatment and disposal of hazardous waste | | | U - Europe without Switzerland |
|----------------------------------|---|--|---------------------|--------|--|
| Tetrachlorodifluoroethane | Tetrachlorodifluoroethane production - heat, from steam, in chemical industry | D:Electricity, gas, steam and air conditioning supply/35:Electricity, gas, steam and air conditioning supply/353:Steam and air conditioning supply/3530:Steam and air conditioning supply | 507*0.01817 | kJ | market for heat, from steam, in chemical industry heat, from steam, in chemical industry Cutoff, U - RoW |
| | Tetrachlorodifluoroethane production - hydrogen fluoride | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms/2011:Manufacture of basic chemicals | 0.727 | g | market for hydrogen fluoride hydrogen fluoride Cutoff, U - RER |
| | Tetrachlorodifluoroethane production - iron ore concentrate | B:Mining and quarrying/07:Mining of metal ores/071:Mining of iron ores/0710:Mining of iron ores | 1.01454/0.65 | g | market for iron ore concentrate iron ore concentrate Cutoff, U - GLO |
| | Tetrachlorodifluoroethane production - trichloromethane | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms/2011:Manufacture of basic chemicals | 4.3376 | g | market for trichloromethane trichloromethane Cutoff, U - RoW |
| | Tetrachlorodifluoroethane | Methoxyflurane flow | 3.7028 | g | |
| | hydrochloric acid, without water, in 30% solution state | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms/2011:Manufacture of basic chemicals | 1.3249/0.3 | g | |
| | iron ore concentrate | B:Mining and quarrying/07:Mining of metal ores/071:Mining of iron ores/0710:Mining of iron ores | 1.01454/0.65 | g | |
| | Dichlorodifluoroethane | Dichlorodifluoroethane production - Tetrachlorodifluoroethane | Methoxyflurane flow | 3.7028 | g |
| Dichlorodifluoroethane | | D:Electricity, gas, steam and air conditioning supply/35:Electricity, | 240 | kJ | market for heat, from steam, in |

| | | | | | |
|-----------------------|---|---|----------|----|--|
| | production - heat, from steam, in chemical industry | gas, steam and air conditioning supply/353:Steam and air conditioning supply/3530:Steam and air conditioning supply | | | chemical industry heat, from steam, in chemical industry Cutoff, U - RoW |
| | Dichlorodifluoroethylene production - methanol | C:Manufacturing/19:Manufacture of coke and refined petroleum products/192:Manufacture of refined petroleum products/1920:Manufacture of refined petroleum products | 0.5822 | g | market for methanol methanol Cutoff, U - GLO |
| | Dichlorodifluoroethylene production - zinc | B:Mining and quarrying/07:Mining of metal ores/072:Mining of non-ferrous metal ores/0729:Mining of other non-ferrous metal ores | 1.1879 | g | market for zinc zinc Cutoff, U - GLO |
| | Dichlorodifluoroethylene production | Methoxyflurane flow | 2.415 | g | |
| | Dichlorodifluoroethylene production - zinc | B:Mining and quarrying/07:Mining of metal ores/072:Mining of non-ferrous metal ores/0729:Mining of other non-ferrous metal ores | 1.1879 | g | |
| Methoxyflurane | Dichlorodifluoroethylene | Methoxyflurane flow | 2.415 | g | |
| | methanol | C:Manufacturing/19:Manufacture of coke and refined petroleum products/192:Manufacture of refined petroleum products/1920:Manufacture of refined petroleum products | 0.582 | g | market for methanol methanol Cutoff, U - GLO |
| | sodium methoxide | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics/2011:Manufacture of basic chemicals | 0.982 | g | market for sodium methoxide sodium methoxide Cutoff, U - GLO |
| | methoxyflurane | Methoxyflurane flow | 2.997 | g | |
| | heat, from steam, in chemical industry | D:Electricity, gas, steam and air conditioning supply/35:Electricity, gas, steam and air conditioning supply/353:Steam and air conditioning supply/3530:Steam and air conditioning supply | 188 | kJ | |
| | sodium methoxide | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, | 9.82E-01 | g | |
| | | | | | |

| | | | | | |
|---------------------------------|--|---|-------------------|--------|--|
| | | plastics/2011:Manufacture of basic chemicals | | | |
| Butylated hydroxytoluene | butene, mixed | C:Manufacturing/19:Manufacture of coke and refined petroleum products/192:Manufacture of refined petroleum products/1920:Manufacture of refined petroleum products | 0.001526 | g | market for butene, mixed butene, mixed Cutoff, U - RoW |
| | o-cresol | C:Manufacturing/20:Manufacture of chemicals and chemical products/201:Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics/2011:Manufacture of basic chemicals | 0.00147 | g | market for o-cresol o-cresol Cutoff, U - GLO |
| | sulfuric acid | C:Manufacturing/24:Manufacture of basic metals/242:Manufacture of basic precious and other non-ferrous metals/2420:Manufacture of basic precious and other non-ferrous metals | 0.001294 | g | market for sulfuric acid sulfuric acid Cutoff, U - RoW |
| | Butylated hydroxytoluene | | 3.00E-03 | g | |
| | sulfuric acid | C:Manufacturing/24:Manufacture of basic metals/242:Manufacture of basic precious and other non-ferrous metals/2420:Manufacture of basic precious and other non-ferrous metals | 1.29E-03 | g | |
| | heat, from steam, in chemical industry | D:Electricity, gas, steam and air conditioning supply/35:Electricity, gas, steam and air conditioning supply/353:Steam and air conditioning supply/3530:Steam and air conditioning supply | 846 | kJ | |
| | | | | | |
| Methoxyflurane Excretion | Fluoride | Elementary flows/Emission to water/unspecified | 2.31E-01 | g | |
| | Fluorine | Elementary flows/Emission to water/unspecified | 8.69E-01 | g | |
| | Methoxyflurane | Elementary flows/Emission to air/unspecified | 1.04895 | g | |
| | Methoxyflurane | Elementary flows/Emission to water/unspecified | 1.114884 | g | |
| | Oxalic acid | Elementary flows/Emission to water/unspecified | 2.13E-01 | g | |
| Transport | transport, freight, lorry, unspecified | Original ecoinvent database/H:Transportation and storage/49:Land transport and transport via pipelines/492:Other land transport/4923:Freight transport by road | 92.189/1000*540.4 | kg*k m | transport, freight, lorry, all sizes, EURO6 to generic market for transport, freight, lorry, unspecified |

| | | | | | |
|--|---|--|-------------------|-----------|---|
| | | | | | transport, freight, lorry, unspecified Cutoff, U - RoW Transport |
| | transport, freight, sea, container ship | Original ecoinvent database/H:Transportation and storage/50:Water transport/501:Sea and coastal water transport/5012:Sea and coastal freight water transport | 92.189/1000*23907 | kg*k m | transport, freight, sea, container ship transport, freight, sea, container ship Cutoff, U - GLO |

Appendix 1 – Detailed list of all inputs (raw materials, production processes, energy sources) and outputs (components parts, excess heat, hazardous waste incineration) subdivided into individual flows. Flows are on the left of the table, with respective inputs in white rows and outputs are in grey rows. Where input/output was already listed in the Ecoinvent library, category and provider details have been shown. The category shows where in Ecoinvent the input/output is catalogued. We also have the input/output “amount” which is correct for the unit we are measuring. For example, we use a weight for the “amount” of green case, but we use weight and distance for the transport input. This data then undergoes OpenLCA analysis, providing us with the results. The “provider” column data can vary depending on which country the Ecoinvent data is based on. For example, we have included solar energy input for the glass vial specifically for Australia as this is where this process happened. This data would be different for Europe. Some data input/outputs do not have country and region-specific data, therefore, the global average value is used as this is the only data that is available to us currently.