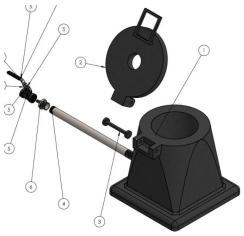
Eco Audit Report

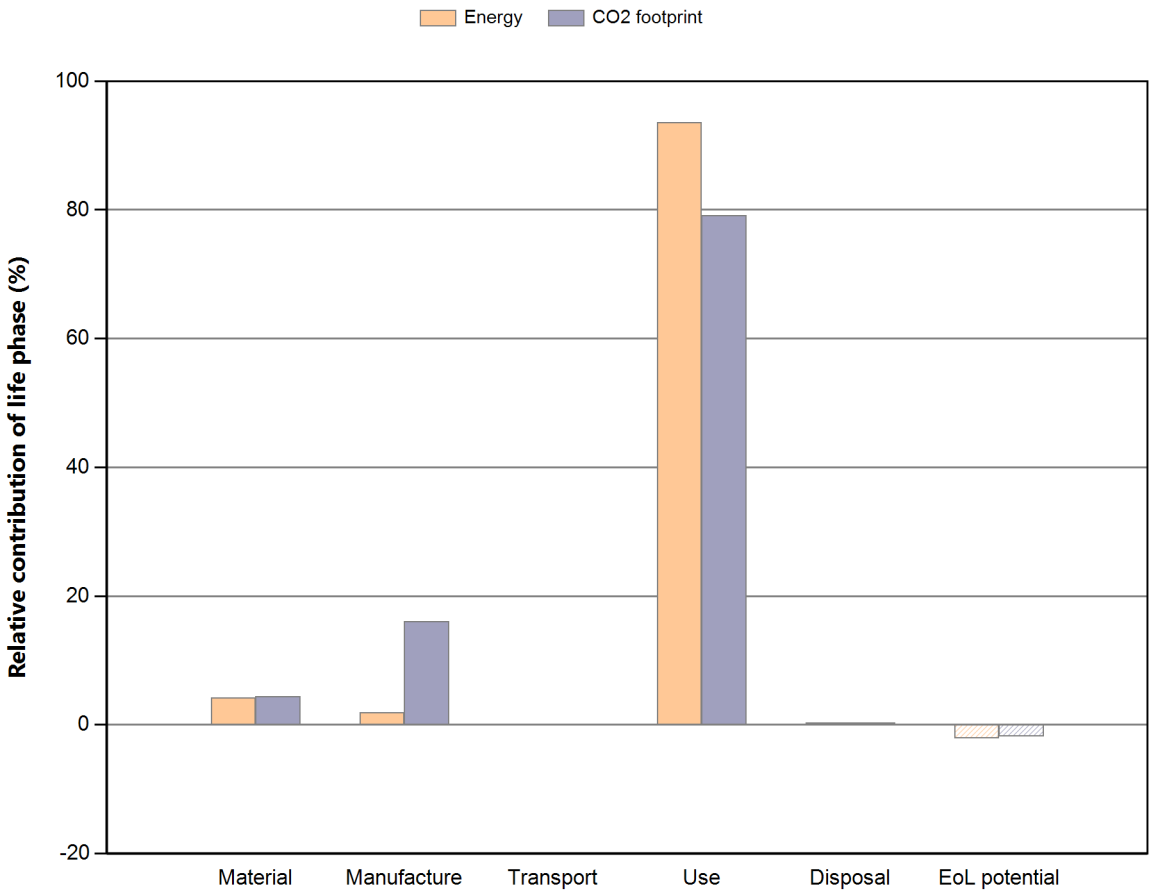


Product name melting part

Country of use The Whole World

Product life (years) 10

Summary:

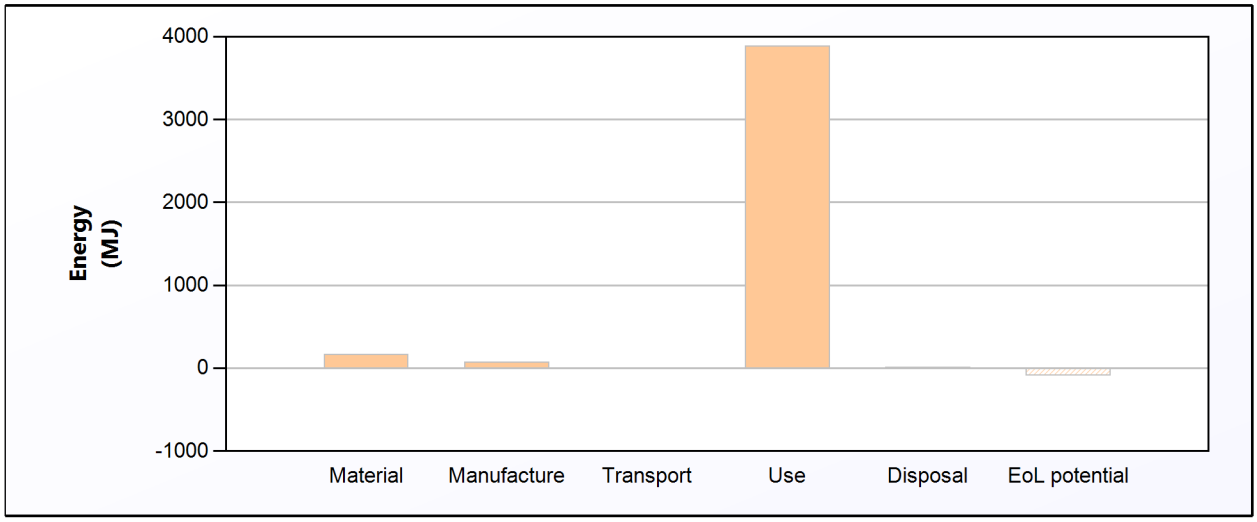


Energy details CO2 footprint details

Phase	Energy (MJ)	Energy (%)	CO2 footprint (kg)	CO2 footprint (%)
Material	173	4.2	15.7	4.4
Manufacture	79	1.9	57.1	16.1
Transport	0	0.0	0	0.0
Use	3.89e+03	93.6	280	79.2
Disposal	13.9	0.3	0.972	0.3
Total (for first life)	**4.16e+03**	**100**	**354**	**100**
End of life potential	-86.9		-6.42	

Energy Analysis

Summary



	Energy (MJ/year)
Equivalent annual environmental burden (averaged over 10 year product life):	416

Detailed breakdown of individual life phases

Material:

Summary

Component	Material	Recycled content* (%)	Part mass (kg)	Qty.	Total mass (kg)	Energy (MJ)	%
furnance	Concrete	Virgin (0%)	51	1	51	41	23.4
lid	Concrete	Virgin (0%)	5	1	5	3.9	2.3
lid pin	Cast iron, ductile (nodular)	Virgin (0%)	0.26	1	0.26	8.5	4.9
bar	Stainless steel	Virgin (0%)	0.41	1	0.41	30	17.2
ball valve	Low carbon steel	Virgin (0%)	0.4	1	0.4	12	7.1
fitting	Stainless steel	Virgin (0%)	0.16	1	0.16	11	6.6
regulator and hose pipe	Stainless steel	Virgin (0%)	0.65	1	0.65	47	27.1
gas lighter	Zinc die-casting alloys	Virgin (0%)	0.068	1	0.068	3.6	2.1
crucible	Concrete	Virgin (0%)	6	1	6	4.7	2.7
thermometer	Stainless steel	Virgin (0%)	0.16	1	0.16	12	6.7
Total				**10**	**65**	**1.7e+02**	**100**

*Typical: Includes 'recycle fraction in current supply'

***User-defined material

Manufacture:

Summary

Component	Process	Amount processed	Energy (MJ)	%
furnance	mixing*	51 kg	56	70.3
lid	mixing*	5 kg	5.4	6.8
lid pin	Casting	0.26 kg	2.9	3.6
bar	Roll forming	0.41 kg	2.1	2.7
ball valve	Roll forming	0.4 kg	1.2	1.5
fitting	Roll forming	0.16 kg	0.81	1.0
regulator and hose pipe	Roll forming	0.65 kg	3.3	4.2
gas lighter	Casting	0.068 kg	0.46	0.6
crucible	mixing*	6 kg	6.5	8.2
thermometer	Roll forming	0.16 kg	0.82	1.0
Total			**79**	**100**

*User-defined process

Transport:

Summary

Breakdown by transport stage

Stage name	Transport type	Distance (km)	Energy (MJ)	%
Total				**100**

Breakdown by components

Component	Mass (kg)	Energy (MJ)	%
furnance	51	0	
lid	5	0	
lid pin	0.26	0	
bar	0.41	0	
ball valve	0.4	0	
fitting	0.16	0	
regulator and hose pipe	0.65	0	
gas lighter	0.068	0	
crucible	6	0	
thermometer	0.16	0	
Total	**65**	**0**	**100**

Use:

Summary

Static mode

Energy input and output type	Fossil fuel to thermal, vented system
Country of use	The Whole World
Power rating (W)	2.1e+02
Usage (hours per day)	1
Usage (days per year)	3.7e+02
Product life (years)	10

Relative contribution of static and mobile modes

Mode	**Energy (MJ)**	**%**
Static	3.9e+03	100.0
Mobile	0	
Total	**3.9e+03**	**100**

Disposal:

Summary

Component	End of life option	Energy (MJ)	%
furnance	Landfill	10	74.1
lid	Landfill	1	7.2
lid pin	Recycle	0.18	1.3
bar	Recycle	0.29	2.1
ball valve	Recycle	0.28	2.0
fitting	Recycle	0.11	0.8
regulator and hose pipe	Recycle	0.45	3.3
gas lighter	Recycle	0.048	0.3
crucible	Landfill	1.2	8.6
thermometer	Landfill	0.032	0.2
Total		**14**	**100**

EoL potential:

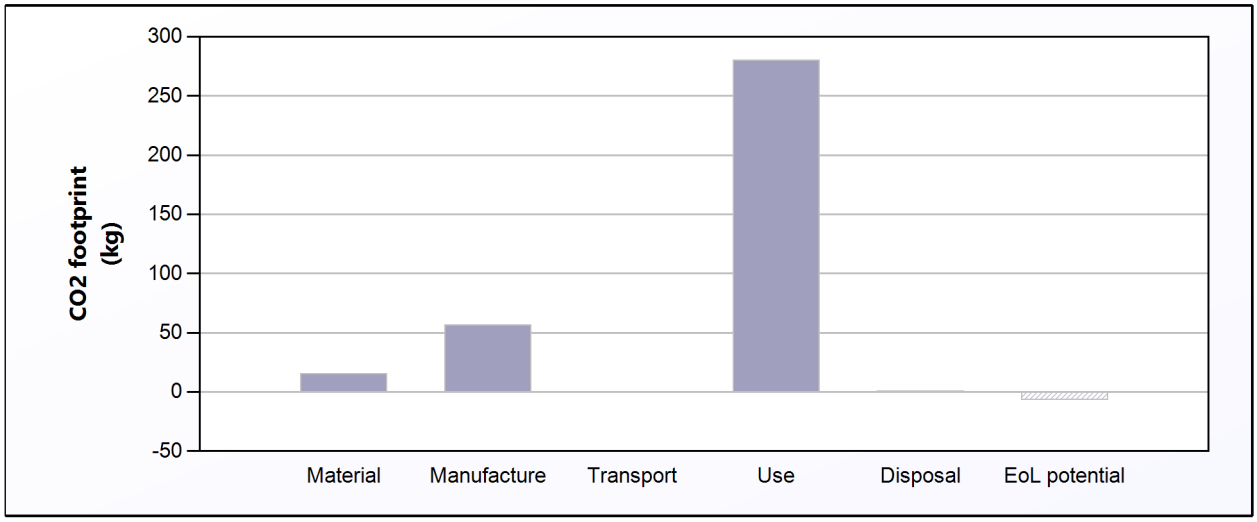
Component	End of life option	Energy (MJ)	%
furnance	Landfill	0	0.0
lid	Landfill	0	0.0
lid pin	Recycle	-6.2	7.2
bar	Recycle	-23	26.8
ball valve	Recycle	-9.1	10.4
fitting	Recycle	-8.9	10.2
regulator and hose pipe	Recycle	-37	42.2
gas lighter	Recycle	-2.7	3.1
crucible	Landfill	0	0.0
thermometer	Landfill	0	0.0
Total		**-87**	**100**

Notes:

Summary

CO2 Footprint Analysis

Summary



	CO2 (kg/year)
Equivalent annual environmental burden (averaged over 10 year product life):	35.4

Detailed breakdown of individual life phases

Material:

Summary

Component	Material	Recycled content* (%)	Part mass (kg)	Qty.	Total mass (kg)	CO2 footprint (kg)	%
furnance	Concrete	Virgin (0%)	51	1	51	5.3	33.6
lid	Concrete	Virgin (0%)	5	1	5	0.51	3.3
lid pin	Cast iron, ductile (nodular)	Virgin (0%)	0.26	1	0.26	0.62	4.0
bar	Stainless steel	Virgin (0%)	0.41	1	0.41	2.2	14.2
ball valve	Low carbon steel	Virgin (0%)	0.4	1	0.4	0.93	5.9
fitting	Stainless steel	Virgin (0%)	0.16	1	0.16	0.85	5.4
regulator and hose pipe	Stainless steel	Virgin (0%)	0.65	1	0.65	3.5	22.4
gas lighter	Zinc die-casting alloys	Virgin (0%)	0.068	1	0.068	0.27	1.7
crucible	Concrete	Virgin (0%)	6	1	6	0.62	3.9
thermometer	Stainless steel	Virgin (0%)	0.16	1	0.16	0.86	5.5
Total				**10**	**65**	**16**	**100**

*Typical: Includes 'recycle fraction in current supply'

***User-defined material

Manufacture:

Summary

Component	Process	Amount processed	CO2 footprint (kg)	%
furnance	mixing*	51 kg	46	81.2
lid	mixing*	5 kg	4.5	7.9
lid pin	Casting	0.26 kg	0.22	0.4
bar	Roll forming	0.41 kg	0.16	0.3
ball valve	Roll forming	0.4 kg	0.086	0.2
fitting	Roll forming	0.16 kg	0.061	0.1
regulator and hose pipe	Roll forming	0.65 kg	0.25	0.4
gas lighter	Casting	0.068 kg	0.034	0.1
crucible	mixing*	6 kg	5.4	9.5
thermometer	Roll forming	0.16 kg	0.061	0.1
Total			**57**	**100**

*User-defined process

Transport:

Summary

Breakdown by transport stage

Stage name	Transport type	Distance (km)	CO2 footprint (kg)	%
Total				**100**

Breakdown by components

Component	Mass (kg)	CO2 footprint (kg)	%
furnance	51	0	
lid	5	0	
lid pin	0.26	0	
bar	0.41	0	
ball valve	0.4	0	
fitting	0.16	0	
regulator and hose pipe	0.65	0	
gas lighter	0.068	0	
crucible	6	0	
thermometer	0.16	0	
Total	**65**	**0**	**100**

Use:

Summary

Static mode

Energy input and output type	Fossil fuel to thermal, vented system
Country of use	The Whole World
Power rating (W)	2.1e+02
Usage (hours per day)	1
Usage (days per year)	3.7e+02
Product life (years)	10

Relative contribution of static and mobile modes

Mode	**CO2 footprint (kg)**	**%**
Static	2.8e+02	100.0
Mobile	0	
Total	**2.8e+02**	**100**

Disposal:

Summary

Component	End of life option	CO2 footprint (kg)	%
furnance	Landfill	0.72	74.1
lid	Landfill	0.07	7.2
lid pin	Recycle	0.013	1.3
bar	Recycle	0.02	2.1
ball valve	Recycle	0.02	2.0
fitting	Recycle	0.0077	0.8
regulator and hose pipe	Recycle	0.032	3.3
gas lighter	Recycle	0.0033	0.3
crucible	Landfill	0.084	8.6
thermometer	Landfill	0.0022	0.2
Total		**0.97**	**100**

EoL potential:

Component	End of life option	CO2 footprint (kg)	%
furnance	Landfill	0	0.0
lid	Landfill	0	0.0
lid pin	Recycle	-0.45	6.9
bar	Recycle	-1.7	26.8
ball valve	Recycle	-0.67	10.5
fitting	Recycle	-0.66	10.2
regulator and hose pipe	Recycle	-2.7	42.3
gas lighter	Recycle	-0.21	3.2
crucible	Landfill	0	0.0
thermometer	Landfill	0	0.0
Total		**-6.4**	**100**

Notes:

Summary

Appendix

User-defined materials:

Custom processes:

Name	Type	Energy	Unit	CO2 footprint	Unit
Custom: mixing	Primary	1.08	MJ/kg	0.9	kg/kg