

Steel LCI Dataset

Functional unit: 1000 kg Electric Arc Furnace Billet

1 Material Inputs		Unit
Main material inputs		
Bentonite (Al ₂ O ₃ .4SiO ₂ .H ₂ O, in ground)	1.00E-03	kg
Dolomite (CaCO ₃ .MgCO ₃ , in ground)	1.66E+00	kg
Iron (Fe, ore)	9.90E+00	kg
Limestone (CaCO ₃ , in ground)	9.60E+01	kg
Manganese (Mn, ore)	1.66E+01	kg
Sand (in ground)	6.08E+00	kg
Sodium Chloride (NaCl, in ground or in sea)	1.03E-01	kg
Steel Scrap	1.10E+03	kg
Land use		
Primary ancillary materials		

2 Energy		Unit
Coal	1.77E+02	kg
Natural gas	2.04E+01	kg
Oil	1.79E+01	kg
Total Energy	9.43E+03	MJ
Fossil Energy	8.44E+03	MJ
Non-fossil Energy	9.90E+02	MJ
Process Energy	9.30E+03	MJ
Transportation Energy	1.33E+02	MJ

3 Water Use		Unit
Total water	8.48E+03	L
Fuel related water		
Process related water		

4 Emissions to Air		Unit
Carbon dioxide	5.95E+02	kg
CO ₂ fossil fuel		

CO2 biomass		
Carbon monoxide	3.97E+00	kg
Sulphur oxides (reported as SO2)	2.98E+00	kg
Nitrogen oxides (reported as NO2)	1.77E+00	kg
Methane	1.29E+00	kg
Dust & particles (includes metals) (1)	7.22E+00	kg
Acid gases (2)	1.01E-01	kg
NMHC (non-methane hydrocarbons)	1.82E-01	kg
VOC		
Hydrocarbons (unspecified)	1.06E-01	kg
Nitrogen		
Other organic compounds		
Other		

5 Emissions to Water		Unit
Phosphates and ammonia	4.82E-03	kg
Oils and greases	4.37E-03	kg
Suspended solids	6.19E-02	kg
Other organics	6.60E-05	kg
Other		
Hydrocarbons		
Metals	3.90E-02	kg
Heavy Metals	1.33E-03	kg
Acids		
BOD		
COD		
Salinity		
Dissolved solids	1.69E-01	kg

6 Wastes		Unit
Total waste	1.33E+02	kg
Process related wastes		
Municipal wastes		
Emissions to Land		
RCRA D		
RCRA C		
Emissions to Deepwell		
RCRA D		
RCRA C		

Footnotes

(1) Total of Lead and Particulates.

(2) Total of Hydrogen Chloride and Hydrogen Fluoride.