

Plastic LCI Dataset

Functional unit: 1000 kg General Purpose Polystyrene (GPPS) (1)

1 Material Inputs		Unit
Main material inputs		
Process Chemicals (2)	1.30E+01	kg
Land use		
Primary ancillary materials		

2 Energy		Unit
Coal	2.93E+03	MJ
Crude Oil	1.12E+04	MJ
Natural Gas	2.76E+04	MJ
Hydro	2.28E+02	MJ
Nuclear	1.03E+03	MJ
Other	2.35E-01	MJ
Total Fuels	4.32E+04	MJ
Coal	8.06E+02	MJ
Crude Oil	2.92E+04	MJ
Natural Gas	1.18E+04	MJ
Total Feedstocks (3)	4.16E+04	MJ
Total Fuel and Feedstocks	8.48E+04	MJ

3 Water Use		Unit
Total water		
Fuel related water		
Process related water		

4 Emissions to Air		Unit
Carbon dioxide	2.20E+03	kg
CO2 fossil fuel		
CO2 biomass		
Carbon monoxide	1.10E+00	kg
Sulphur oxides (reported as SO2)	5.20E+00	kg
Nitrogen oxides (reported as NO2)	6.90E+00	kg

Methane	2.40E+01	kg
Dust & particles (includes metals) (4)	2.41E+00	kg
Acid gases	9.60E-02	kg
NMHC (non-methane hydrocarbons)		
VOC (5)	5.90E+00	kg
Hydrocarbons (unspecified)	8.30E-01	kg
Nitrogen	4.80E+00	kg
Other organic compounds (6)	2.80E-02	kg
Other (7)	1.70E-02	kg

5 Emissions to Water		Unit
Phosphates and ammonia	1.90E-02	kg
Oils and greases	2.90E-01	kg
Suspended solids	4.40E+00	kg
Other organics	5.50E-02	kg
Other (7)	2.50E+00	kg
Hydrocarbons	7.70E-02	kg
Metals	1.00E+00	kg
Heavy Metals		
Acids	2.20E-02	kg
BOD	9.70E-02	kg
COD	4.10E+00	kg
Salinity	5.00E+00	kg
Dissolved solids	2.30E+01	kg

6 Wastes		Unit
Total waste		
Process related wastes		
Municipal wastes		
Emissions to Land		
RCRA D (8)	7.30E+01	kg
RCRA C (9)	2.80E+00	kg
Emissions to Deepwell		
RCRA D (8)	1.30E+01	kg
RCRA C (9)	1.50E-02	kg

Footnotes

- (1) Numbers may not add up exactly due to rounding off
- (2) Includes additives, catalysts, chemicals, etc.
- (3) Feedstock values are the theoretical energy that could be recovered via combustion
- (4) Total of Metals and metal compounds and PM10
- (5) VOCs may or may not include compounds already listed under "hydrocarbons" or "other organic compounds"
- (6) Includes oxygenated hydrocarbons, halogenated hydrocarbons, nitrogen-containing hydrocarbons, etc.

- (7) Includes compounds not containing both carbon and hydrogen
- (8) RCRA D EPA-regulated non-hazardous waste
- (9) RCRA C EPA-regulated hazardous waste