

## Plastic LCI Dataset

Functional unit: 1000 kg Linear Low Density Polyethylene (LLDPE) (1)

1 Material Inputs		Unit
<b>Main material inputs</b>		
Process Chemicals (2)	3.00E+01	kg
<b>Land use</b>		
<b>Primary ancillary materials</b>		

2 Energy		Unit
Coal	2.64E+03	MJ
Crude Oil	8.16E+03	MJ
Natural Gas	2.49E+04	MJ
Hydro	2.21E+02	MJ
Nuclear	9.91E+02	MJ
Other	5.17E-01	MJ
Total Fuels	3.69E+04	MJ
Coal		
Crude Oil	2.08E+04	MJ
Natural Gas	2.57E+04	MJ
Total Feedstocks (3)	4.65E+04	MJ
Total Fuel and Feedstocks	8.34E+04	MJ

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

4 Emissions to Air		Unit
Carbon dioxide	1.90E+03	kg
CO2 fossil fuel		
CO2 biomass		
Carbon monoxide	9.30E-01	kg
Sulphur oxides (reported as SO2)	4.40E+00	kg
Nitrogen oxides (reported as NO2)	5.70E+00	kg

Methane	2.70E+01	kg
Dust & particles (includes metals) (4)	1.41E+00	kg
Acid gases	8.50E-02	kg
NMHC (non-methane hydrocarbons)		
VOC (5)	7.50E+00	kg
Hydrocarbons (unspecified)	1.50E+00	kg
Nitrogen	7.00E+01	kg
Other organic compounds (6)	4.60E-02	kg
Other (7)	2.40E-02	kg

<b>5 Emissions to Water</b>		<b>Unit</b>
Phosphates and ammonia	5.00E-03	kg
Oils and greases	1.10E-01	kg
Suspended solids	3.00E+00	kg
Other organics	9.80E-02	kg
Other (7)	1.30E+00	kg
Hydrocarbons	1.70E-01	kg
Metals	2.60E-01	kg
Heavy Metals		
Acids	1.00E-01	kg
BOD	7.20E-02	kg
COD	6.00E-01	kg
Salinity	3.60E+00	kg
Dissolved solids	1.70E+01	kg

<b>6 Wastes</b>		<b>Unit</b>
Total waste		
Process related wastes		
Municipal wastes		
Emissions to Land		
RCRA D (8)	5.20E+01	kg
RCRA C (9)	2.20E+00	kg
Emissions to Deepwell		
RCRA D (8)	9.20E+00	kg
RCRA C (9)	1.10E-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