

## PLASTIC MATERIALS & EARTH'S ENERGY RESOURCES

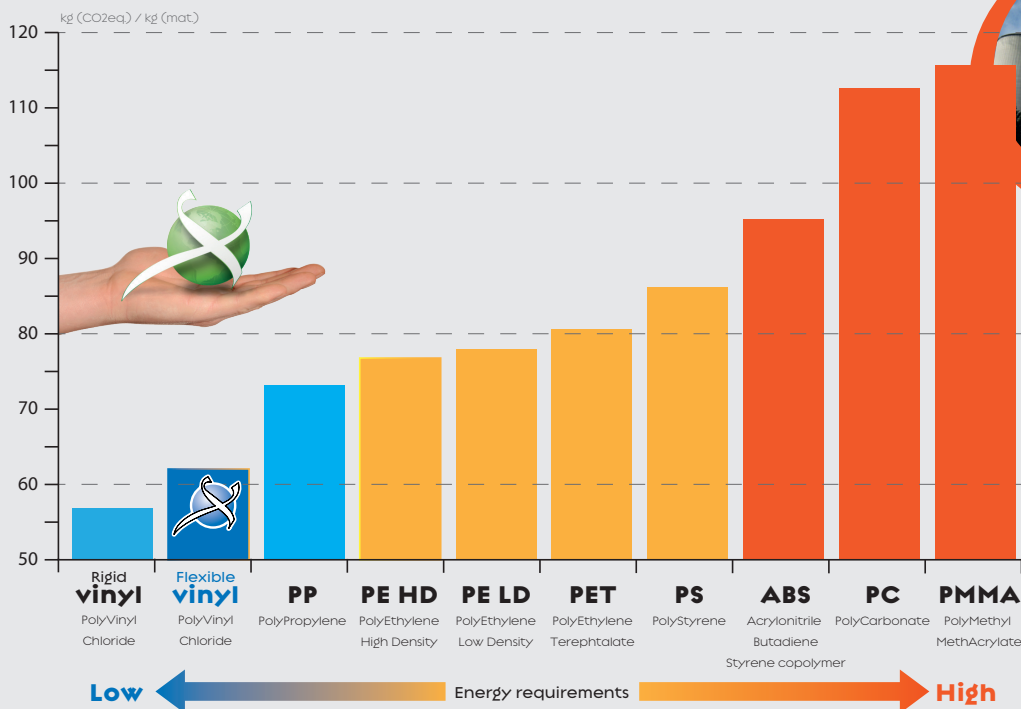
Like any products, plastic materials have impacts on earth's energy resources. To assess those impacts, plastics eco-profile studies use the gross energy required to produce them. It includes all gross primary fuels used as energy or raw materials and all other energy resources consumed all along the production process (from earth's resources extraction to plastics resins or compounds production).

Plastic materials have very different gross energy requirements, leading to very different impacts on earth's resources. Making the right material choice has become essential in a context where earth's energy resources need to be carefully controlled.

✓ Clearway help to make the right material choice to save and preserve earth's natural resources.

### PLASTIC MATERIALS PRODUCTION GROSS ENERGY REQUIREMENTS

Gross energy required to produce 1 kg of plastic material resin or compound\*.



\* The gross or cumulative energy requirements refer to the total energy consumption when the production processes are traced back through all operations from plastic material resin or compound production to the extraction of raw materials from the earth. Masses of fuels have all been converted to energy units using the gross calorific values. (It includes Fuel production & delivery energy, Energy content of delivered fuel, Transport energy and Feedstock energy coming from Electricity, Oil fuels and Other fuels - For more details refer to data sources).

Data sources:

- Eco-profiles of the European Plastics Industry (vinyl: Ostermayer & Giegrich 2006; PS: Boustead 2006; Others: Boustead 2005) - [www.ica.plasticseurope.org](http://www.ica.plasticseurope.org)
- Eco-profile of high volume commodity phthalate esters - European Council for Plasticizers and Intermediates (ECPI 2001) - [www.ecpi.org](http://www.ecpi.org)

Note: Flexible vinyl data are based on a mix of vinyl resin (65%) + Phthalate esters (35%).

Plastics which use high levels of energy are often used in order to make more profits to the detriment of environment and earth's resources. Such practices have contribute to degrade the image of plastics in the public opinion instead that low production energy requirements plastics such as flexible PVC are earth's resources respectful and environmental friendly.

Due to its very low production energy requirements and its highly efficient applications, such as strong thermal insulation,

✓ Clearway Online flexible vinyl strips & sheets save and preserve earth's natural resources and environment.



ENVIRONMENT & SAFETY

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