RH Logic 400

Calculation of calorific power

The calorific power (MJ) for the whole chair is the sum of the calorific power for each of the different materials it consists of. The calorific power for each of the materials is calculated by multiplying the calorific value (MJ/kg) with the total mass (kg) of the material in the chair. All the calorific values, except for two, were determined based on total combustion tests provided by FCBA Institut Technologique in Bordeaux. The calorific values for acrylonitrile butadiene styrene[i] and wool[ii] were found in literature.

Model	Component	Mass (kg)	Calorific Value (MJ/Kg)	Calorific Power (MJ)
RH Logic 400	Polyurethane	1,406	30,57	42,98
	Polyamide with glass fiber	0,058	29,68	1,72
	Polypropylene - Repro	4,971	44,04	218,92
	Polypropylene - virgin	0,076	44,59	3,39
	Polyoxymethylene	0,542	16,99	9,21
	Polyethylene (HD/LD-PE)	0,198	45,23	8,96
	Rubber	0,019	42	0,80
	Wool	0,58	23	13,34
	Acrylonitrile butadiene styrene (ABS)	0,017	37,5	0,64
			Total Calorific Power (MJ)	**299,95**

Best regards,

Sara Alainezhad Kjærvik
Environmental Advisor – Toxicologist

BERGFALD
miljørådgivere

---

[i] Lyon, Richard E. *Chapter 3. Plastics and Rubber.* Fire Safety Branch. Federal Aviation Administration. 2004.

[ii] Purkiss, John A. and Li, Long-Yuan. *Fire Safety Engineering Design of Structures.* Third edition. Taylor & Francis Group 2014