

Backfill and light embankment

Descriptif

Géogom is a range of rubber chips, made from recycled end-of-life tyres. All tyres are collected in France, they are from premium brands with a stable chemical composition. They have been proved harmless and risk-free for the environment.

Typical implementations



Physical properties

True density (t/m ³)	1,16 (1,08 à 1,27)
Bulk density (t/m ³)	0,45 – 0,6 (bulk) 0,6 – 0,8 (under load)
Elastic modulus (MPa)	0,77 – 1,13 (laboratory ¹) 1,5 – 2 (on site ²)
Porosity	55 % (40 kPa axial pressure)
Permeability (m/s)	5.10 ⁻⁴ à 1.10 ⁻⁵ (10 to 500 kPa load)
Residual moisture	2 à 4,3 % ³
Angle of repose	26 à 36° ⁴
Cohesion	0 kPa
Thermal conductivity (W/m.K)	0,1 à 0,35 ⁵

Chips size

- Above 97% of chips below 230 mm
- Above 85 % of chips in the 50-200 mm range
- Above 85% of chips without any metallic wires above 20 mm

Quality guarantee

- Continuous quality control, from the collection of tyres to their transformation into Géogom chips
- Certified Qualicert-Valorpneu partners
- Measurements in compliance with XP T47 751 (2006) and EN 14243-3 (2018) standards



¹Humprey et al (1993), ²Lämsivaraa et al (2000)
³Humprey et al (1992), ⁴Holtz et Kovacs (1991), ⁵Edeskär 2004



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Environmental impact

Reference : Acceptability of alternative materials in road engineering Environmental assessment, March 2011	Quantity released by Géogom chips on site Values obtained on site (mg/kg of dry matter)	Released quantity at L/S=10 l/kg (Leaching test NF EN 12457-2 or NF EN 12457-4) Set of values to be respected by 80% of the samples (mg/kg of dry matter)
Arsenic (As)	0	0,5
Barium (Ba)	0,219	20
Cadmium (Cd)	0	0,04
Chromium (Cr)	0	0,5
Copper (Cu)	0,009	2
Mercury (Hg)	0	0,01
Molybdenum (Mo)	< LOQ*	0,5
Nickel (Ni)	< LOQ*	0,4
Lead (Pb)	0	0,5
Antimony (Sb)	0	0,06
Selenium (Se)	0	0,1
Zinc (Zn)	0,164	4
Fluorides	0	10
Chlorides	5,6	800
Sulphates	8.69 (SO ₄ ²⁻)	1000
Soluble fraction	-	4 000
Total organic carbon (TOC)	-	30 000
Benzene, toluene, ethylbenzene et xylenes (BTEX)	< LOQ*	6
Polychlorinated biphenyl (PCB).	0	1
Total hydrocarbons C10 à C40	< LOQ	500
Polycyclic aromatic hydrocarbons (PAHs)	*< LOQ*	50
Dioxins et Furans	0	10 ng I-TEQ _{OMS 2005} /kg dry content

*Limit Of Quantification

