



# Green Piping Material for Environment Sustainability



## Environmental Benefits with Alom Products

Plastics, one of the most researched materials today, play a crucial role in global sustainable development. Plastic pipes are lighter as well as more robust than most of the conventional rigid materials, typically weighing 95% lesser than their concrete equivalent. This allows them to be catered specifically to the application concerned, thereby optimizing the material consumption and lowering the burden on environment with reduced greenhouse gas emissions.

Alcorr Double Wall Corrugated (DWC) Polyethylene (PE) Pipes are significantly lighter than its counterparts in plastic piping system (such as Solid Wall PE, u-PVC) domain as well and therefore even more efficient in terms of Greenhouse Gas emissions.

Alcorr Pipes can be transported in higher total lengths than their rigid pipe equivalents because of its light weight and scope for telescopic placements and higher stack heights. Considerable reduction in transportation deliveries not only contributes to reduced CO<sub>2</sub> emissions, reduced vehicle movement on-site minimizes health and safety risks.

Alcorr Pipes have a glass-smooth inner surface (leading to lesser Manning's 'n') and therefore for identical drainage catchments/sewerage zones smaller sizes with same hydraulic gradient can be configured in comparison to the heavier, higher sized concrete pipes. These advantages further reduce overall CO<sub>2</sub> emissions.

Alcorr DWC PE Pipes and fittings final products are also completely recyclable and will never need to be discarded in landfills.

Apart from the above, the joints provided by Alcorr pipes are the best in the industry and are completely leak proof. It doesn't allow for infiltration of ground water or exfiltration of the sewerage components. This ensures that the environment remains pristine and unpolluted.

The table below shows how **Alcorr** DWC PE Pipes compare in CO<sub>2</sub> emissions with different piping material including concrete pipes from the cradle (production point) to gate (before transportation to the consumer).

Example: The CO<sub>2</sub> emissions for 450 mm ID Class NP<sub>3</sub> RC Pipe is in the tune of 55.51 Kg / M which is approximately three times more than its hydraulically equivalent 400 mm **Alcorr** DWC PE Piping system.

Pipe Size (ID) (mm)	Alcorr DWC PE Pipe		Solid Wall PE Pipe (Nearest equivalent ID)		Reinforced Concrete Pipe	
	Class SN 8 (EN 13476-3)		PE - 80,PN 2.5 (IS : 14333)		Class NP <sub>3</sub> (IS:783)	
	Weight Kg/m	CO <sub>2</sub> emission Kg/m	Weight Kg/m	CO <sub>2</sub> emission Kg/m	Weight Kg/m	CO <sub>2</sub> emission Kg/m
250	4.90	9.80	5.91	11.82	80	17.8
400	8.4	16.8	15.58	31.16	250.0	55.51
600	21.50	42.78	37.93	75.86	392.89	87.23
800	36.00	72.00	N/a	N/a	640.84	142.29
1000	59.00	118.00	N/a	N/a	940.57	208.80

**Table 1: CO<sub>2</sub> Emissions in Pipe manufacturing (Alcorr DWC PE / Solid Wall PE/Concrete Pipes)**