

Polyvinyl Chloride - PVC (beta Scorecard)

Plastics Scorecard (v.1.0 beta) -- Polyvinyl Chloride (PVC)

Maximum Attainable Grade:[†] F

Comments:

The maximum attainable grade for PVC is F because of its Grade F for breakdown products. In addition, PVC's highest grade for monomer is D.

Life Cycle Stage	Attribute	Grade	Comments
1 Feedstock Production			
	1.a Pesticide Use	not applicable	
	1.b GMO Use	not applicable	
	1.c Sustainable Agriculture Practices	not applicable	
	1.d Post-Consumer Recycled (PCR) Content (<i>fossil fuels only</i>)	C- to A-	Grade depends on % post-consumer recycled content. Increased post-consumer content lowers the fossil fuel penalty and improves the Grade.
Grade range for Feedstock Production:* C- to A-			
2 Manufacturing			
	2.a Primary + Intermediate Chemicals	C-	Ethylene dichloride (intermediate chemical) is a California Prop 65 - making it a Green Screen Red chemical.
	2.b Monomer	F to D	Vinyl chloride monomer is a known human carcinogen (Green Screen Red chemical) - Grade F if used in children's or food products, otherwise Grade D
	2.c Catalysts	C- to A+	Grade depends on catalysts used
	2.d Additives	F to A+	Grade depends on additives used
	2.e Nanomaterials	C- to A+	Depends on whether nanomaterials are used in the product
Grade range for Manufacturing:* F to D			
3 Use and End of Life			
	3.a Chemical Releases & Breakdown Byproducts	F	The combustion of PVC forms dioxins and furans, which are carcinogens, reproductive toxicants as well as PBTs (these are Green Screen Red chemicals).
	3.b Single Use Biobased Plastic Products	not applicable	
Grade range for Use and End of Life:* F			
<p>[†] The "maximum attainable grade" for a plastic is determined by the lowest grade it receives for any single attribute. *The "best possible grade" for a stage is determined by the lowest grade attainable for any criterion for that stage. It is important to note that these are draft assessments, since they are based on a beta version of the Scorecard and are likely to change with the finalization of v.1.0.</p>			