



HerculesTM
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Polyvinyl-Coated HDG Sheet

Description

Polyvinyl-coated hot dipped galvanized (HDG) sheet is carbon steel coated in zinc and then laminated or coated with a durable polyvinyl (PVC) layer. It is designed for enhanced corrosion resistance, chemical durability, and surface protection.

Purpose in HVAC

Used for ductwork in high-humidity or corrosive environments (such as swimming pools, laboratories, wastewater treatment, coastal areas), where added protection beyond standard galvanized is needed.

Material

Base metal is typically G90 HDG sheet per ASTM A653. A PVC or thermoplastic film (typically 4–10 mils thick) is factory-applied to one or both sides. Hercules standard coating is 4 mils, both sides.

Coating Properties

The polyvinyl layer resists chemicals, UV exposure, and abrasion. Available in colors such as white or gray for cleanroom or visible duct systems.

Specs

Often meets ASTM A653 for substrate, and complies with SMACNA standards for duct applications. Fire-rated versions (UL 181) available.
(Note standard 4X4 coating will not meet a smoke spread rating)

Thickness Range

Typically, 24 to 18 gauge (approx. 0.025" to 0.050"). Coating thickness is not included in steel gauge.

Formability

Good formability for typical HVAC duct construction. Coated surface should not be scored or stretched excessively to prevent delamination.



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Weldability

Not typically welded; mechanical fastening or adhesive systems are preferred to maintain coating integrity.

Corrosion Resistance

Excellent due to dual protection—zinc coating and polyvinyl barrier.
Withstands chemical exposure and salt air.

Cleanability

Smooth vinyl surface is easy to clean and resists microbial growth.
Commonly used in healthcare, food processing, and cleanroom environments.

Pros

Superior corrosion and chemical resistance, long service life, clean aesthetic, low maintenance.

Cons

Higher cost than standard HDG, not suitable for high-temperature applications,
limited repairability if coating is damaged.