Technical Data Sheet

Polyol Sanyol W-Series

Revision: July 2026

Product Description

Wood foam or Wood imitation foam (entitled in the global market) is a special group of hard polyurethane (PU) foams that are generated via the reaction of a formulated polyol (containing water as a chemical blowing agent) with polyisocyanate (i.e., PM-200, KP-200, or M-200). Herein, the Sanyol W-series is designed for polyols, which can be used through a PU injection machine or handwork for the field of imitation wood, blocks, and so on. Manufactured W-series foams are offered with divergent volume risings attributed to different densities (e.g., density 200 with a four-fold increase in volume; density 500 with a double volume increase, and density 1000 with a fixed volume).

Application Areas

Sanyol W-Series are used for the manufacture of wood imitation that provides decorative requirements and are used generally in wood-related industries. Regarding application areas of PU wood foams made by the formulated polyols, W-Series comprises the following types:

- **Polyol Sanyol W100**: for manufacturing wood PU foam usable in Baseboard as a strip covering the foot of the walls and the line of wall-floor joints of buildings
- **Polyol Sanyol W200**: for manufacturing wood PU headboard foam
- **Polyol Sanyol W500**: for manufacturing wood PU foam as wooden pieces
- **Polyol Sanyol W1000**: for manufacturing wood PU foam applicable in furniture construction (sofa and throne handles)

Benefits

- Suitable for the complex mold having Simple molding and production processes
- high physical and mechanical properties
- The low weight of manufactured structures
- Appropriate appearance level
- Smooth skin and high surface hardness and wear resistance of manufactured products
- High stability of manufactured products (no deformation)

Package(s)

Sanyol W-Series are packed and delivered in Iron drums, 220 kg per drum as a standard pack.

Safety, Storage & Handling

Sanyol W-Series should be kept in properly sealed, moisture-tight containers and stored indoors at ambient temperature (15-35 ℃) in a dry and well-ventilated area. Storage at low temperatures (below 5 ℃) may lead to marked viscosity increase, and this may cause difficulties in processing. Extended storage at temperatures above 60 (℃) is not recommended to prevent deterioration of the product quality.

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Product Specification

Property	Unit	Value	Test Method/Standard
Viscosity at 25 °C	cp	500 - 1500	ASTM D4878
Density at 25 °C	Kg/m^3	1.1 – 1.2	ASTM D4669
OH Value	mg KOH/g	250 – 350	ASTM D4274
Water Content	%	< 0.7	ASTM D4672
Acid Content	mg KOH/g	< 1	ASTM D4662
NCO Content	%	30.5 – 32	ASTM D5155

Parameters of PU Foam

Property	Unit	Value	Test Method/Standard
Formulated Polyol/Isocyanate	(w/w)	100/70-120	Calculated
Mixing Time	sec	8 – 10	-
Cream Time	sec	30 – 70	ASTM D7487
Gel Time	min	3 – 5	ASTM D7487
Tack Free Time	min	12 – 17	ASTM D7487
Free Rise Density	kg/m^3	32 – 40	ASTM D7487
Overall Density	kg/m^3	120 – 1000	ASTM D1622

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