

Technical Data Sheet

1. Product Overview

Revision: 1.1

Product Name: ASA WGX6300

Grade: Injection Molding

Color: Natural

Form: Pellets

ASA WGX6300 is a natural, injection-molding grade Acrylonitrile Styrene Acrylate (ASA) polymer designed primarily for automotive and outdoor applications. It provides outstanding weatherability, color stability, and gloss retention under prolonged UV exposure. The material exhibits excellent mechanical strength, dimensional stability, and thermal resistance, making it suitable for high-performance exterior parts.

2. Typical Applications

- Automotive exterior parts (radiator grills, mirror housings, trims)
- Outdoor equipment and enclosures
- Garden tools and decorative components
- Electrical housings exposed to sunlight
- Consumer products requiring long-term color stability

3. Physical Properties

Property	Test Method	Unit	Typical Value
Specific Gravity	ISO 1183	kg/m ³	1070
Linear Mold Shrinkage	ISO 294-4	%	0.5 – 0.9
Melt Flow Rate (220°C/10 kg)	ISO 1133	cm ³ /10 min	15

4. Mechanical Properties

Property	Test Condition	Test Method	Unit	Typical Value
Tensile Stress at Yield	23°C	ISO 527	MPa	48
Tensile Strain at Yield	23°C	ISO 527	%	3.3
Elongation at Break (MD)	23°C	ISO 527	%	9
Flexural Strength	23°C	ISO 178	MPa	70

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Hardness, Ball Indentation	—	ISO 2039-1	MPa	80
IZOD Impact Strength (Notched)	—	ISO 180/A	kJ/m ²	14

5. Thermal Properties

Property	Test Method	Unit	Typical Value
Heat Deflection Temperature (annealed, 0.45 MPa)	ISO 75	°C	101
Vicat Softening Temperature (50°C/h, 50N)	ISO 306	°C	97
Flammability (1.6 mm)	UL 94	Class	HB

6. Recommended Processing Conditions

Parameter	Unit	Recommended Range
Drying Temperature	°C	80
Drying Time	hrs	2 – 4
Mold Temperature	°C	60
Melt Temperature	°C	240 – 280
Injection Velocity	mm/s	up to 200

Ensure material is properly dried before processing to avoid surface defects and hydrolytic degradation. Use a low to medium injection speed for improved surface gloss. Back pressure: 5–10 bar recommended for optimal melt homogenization.

7. Storage & Handling

Store in a dry, well-ventilated area in sealed containers, away from direct sunlight and moisture. Exposure to humidity may affect flow properties. Use the oldest stock first (FIFO principle). Avoid prolonged storage above 30°C. Always dry before molding.

8. Safety & Regulatory Information

ASA WGX6300 complies with RoHS and REACH regulations and contains no halogenated flame retardants. Material is recyclable under standard thermoplastic recycling streams. Safety Data Sheet (SDS) available upon request.

9. Disclaimer

The values and information presented are typical and provided for reference only. They should not be used as product specifications. Actual results may vary depending on processing parameters, equipment, and part design.