

# Technical Data Sheet

Product name: IC3D Standard ABS

Revision date: 07/01/2020

Print date 07/01/2020



## General Information

General			
Material Status	- Commercial: Active		
Availability	- Africa & Middle East - Asia Pacific	- Europe - Latin America	- North America
Features	- High Impact Resistance		
RoHS Compliance	- RoHS Compliant		
Automotive Specifications	Available Colors: Black, Blue, Green, Grey, Natural, Orange, Red, White, Yellow		
Resin ID (ISO 1043)	->ABS<		

## ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity <sup>2</sup>	1.03		ASTM D792
Density (73°F)	1.03	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (200°C/5.0 kg)	1.1	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	13	cm <sup>3</sup> /10 min	ISO 1133
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>3</sup> (Yield)	5470	psi	ASTM D638
Tensile Stress (Yield)	5800	psi	ISO 527-2/50
Tensile Stress (Break)	4350	psi	ISO 527-2/50
Tensile Elongation <sup>3</sup> (Break)	30	%	ASTM D638
Tensile Strain (Break)	35	%	ISO 527-2/50
Flexural Modulus <sup>4</sup>	310000	psi	ASTM D790
Flexural Modulus <sup>5</sup>	261000	psi	ISO 178
Flexural Strength <sup>4</sup>	8800	psi	ASTM D790
Flexural Stress <sup>5</sup>	8410	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	12	ft-lb/in <sup>2</sup>	
73°F	17	ft-lb/in <sup>2</sup>	
Notched Izod Impact			ASTM D256
73°F, 0.126 in	7.5	ft-lb/in	
73°F, 0.252 in	5.9	ft-lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	11	ft-lb/in <sup>2</sup>	
73°F	16	ft-lb/in <sup>2</sup>	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	108		ASTM D785

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	367	°F	ASTM D648
Heat Deflection Temperature 264 psi, Unannealed	180	°F	ISO 75-2/A
Deflection Temperature Under Load 264 psi, Annealed	397	°F	ASTM D648
Heat Deflection Temperature 264 psi, Annealed	207	°F	ISO 75-2/A
Vicat Softening Temperature	423	°F	ASTM D1525 <sup>6</sup>
Vicat Softening Temperature --	205		ISO 306/B50
--	219	°F	ISO 306/A50
CLTE - Flow	5.20E-05	in/in/°F	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94

## Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176 to 185	°F
Drying Time	2.0 to 4.0	hr
Rear Temperature	356 to 428	°F
Middle Temperature	374 to 446	°F
Front Temperature	374 to 446	°F
Mold Temperature	86 to 158	°F

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 23°C

<sup>3</sup> 0.24 in/min

<sup>4</sup> 0.11 in/min

<sup>5</sup> 0.079 in/min

<sup>6</sup> Rate A (50°C/h), Loading 1 (10 N)

*Disclaimer: The technical data contained on this data sheet is furnished without charge or obligation and accepted at the recipient's sole risk. This data should not be used to establish specifications limits or used alone as the basis of design. The data provided is not intended to substitute any testing that may be required to determine fitness for any specific use.*