



PRODUCT CARD

ABS-ESD VE

1. GENERAL INFORMATION ABOUT THE PRODUCT

Noctuo ABS ESD is an ABS (acrylonitrile butadiene styrene copolymer) with modification for electrostatic discharge safety. It can dissipate electric charges due to its lower electrical resistivity. Mechanically, it is stiffer than regular ABS filaments, which give it more flexural strength, but lower impact resistance.

Main ABS-ESD features:

- Surface resistivity $\sim 10^7$ Ohm
- Volume resistivity $\sim 10^5$ Ohm
- Good mechanical strength, stiffness and hardness
- Moderate impact resistance
- Good thermal stability

2. TECHNICAL PARAMETERS

CHARACTERISTICS	TEST METHOD	TEST CONDITIONS	IU	VALUE
	ISO			
PHYSICAL				
Density	ISO 1183	-	g/cm ³	1.12
MECHANICAL				
Tensile strength	ISO 527	50mm/min	MPa	39,6
Tensile elongation	ISO 527	50mm/min	%	3,84
Tensile modulus	ISO 527	2mm/min	MPa	3105
Flexural strength	ISO 178	-	MPa	72,8
Flexural modulus	ISO 178	-	MPa	3197
Notched Charpy impact strength	179-1	1eA	kJ/m ²	2
Unnotched Charpy Impact strength	179-1	1eA	kJ/m ²	17,27
ELECTRICAL				
Surface resistivity	IEC 60093	-	Ω	10^7
Volume resistivity	IEC 60093	-	Ωxcm	10^5

Tests have been done in 23°C, if it's not marked differently.

3. RECOMMENDATION OF PRINTING



Recommended parameters of printing:

Hotend temperature	240 - 265 °C
Bed temperature	90 – 105 °C
Print speed	< 200 mm/s

4. SAFETY NOTES



Air filters in printer is recommended.

ABS ESD needs to be used only in well ventilated conditions.

Inhaling fumes generated during the printing must be avoided.

Generating fumes during the printing depends mainly on printing temperature. In case of visibly raising emission level, the printing needs to end. Check the hotend temperature and efficiency of the control system before using it next time.

In proper using conditions, the product doesn't endanger health.

It's forbidden to set fire or exceed decomposition temperature!

Decomposition of ABS ESD is typically over 300 °C.

Main ingredient of decomposition is styrene.

Detailed safety information available in SDS.