

Nylon Insulating Washer Assortment Kit with - Black

Overview

The Black Nylon Insulating Washer Assortment Kit is a comprehensive hardware collection featuring 1,150 high-grade nylon washers across 15 standard sizes. Designed to provide a soft, non-conductive barrier, it prevents metal fasteners from scraping protective solder masks or accidentally shorting sensitive PCB traces. Backed by Probots™ Source-Trace and QC-Pass, the washers are molded from durable nylon that resists cracking under screw tension. Packaged in a clear, snap-lock 15-compartment organizer, it is an essential kit for electrical insulation, mechanical spacing, and protecting sensitive electronics in standard M2 to M8 equivalent configurations.



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Technical Specifications

Parameter	Value	Notes
Material	High-grade Nylon	Resists cracking under tension
Color	Black	
Total Quantity	1,150 Pieces	
Number of Unique Sizes	15 Sizes	Covers standard M2 to M8 equivalents
Electrical Properties	Non-conductive / Insulating	Ideal for PCB and low-voltage mounting
Mechanical Properties	Corrosion-resistant, non-magnetic	Shock-absorbing physical barrier
Packaging	Reusable clear plastic organizer	15 compartments with snap-lock

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Dimensions & Qty:

Nylon Insulating Washer Size Specifications (ID × OD × Thickness)

Sl. No.	Inner Diameter (ID)	Outer Diameter (OD)	Thickness	Quantity
1	6 mm	12 mm	1.2 mm	50 pcs
2	6 mm	12 mm	1.2 mm	50 pcs
3	4 mm	9 mm	1 mm	100 pcs
4	4 mm	8 mm	1 mm	100 pcs
5	2 mm	5 mm	1 mm	100 pcs
6	8 mm	16 mm	1.5 mm	25 pcs
7	5 mm	10 mm	1 mm	50 pcs
8	4 mm	10 mm	1 mm	100 pcs
9	3 mm	8 mm	1 mm	100 pcs
10	2.5 mm	5 mm	1 mm	100 pcs
11	8 mm	16 mm	1.5 mm	25 pcs
12	5 mm	10 mm	1 mm	50 pcs
13	5 mm	8 mm	1 mm	100 pcs
14	3 mm	7 mm	1 mm	100 pcs
15	3 mm	6 mm	1 mm	100 pcs
Total		–	–	1,150 pcs



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Usage & Installation Instructions

1. **Size Selection:** Identify and select the appropriate washer size (M2 through M8 equivalent) from the compartment to match your machine screw or brass standoff.
2. **Placement:** Place the nylon washer directly between the metal screw head (or nut) and the surface of your printed circuit board (PCB), frame, or chassis.
3. **Double Insulation (Recommended):** For maximum safety and isolation, use two washers per mounting hole: one on top (under the screw head) and one on the bottom (above the standoff). This completely isolates the PCB from the metal fastener.
4. **Tooling:** No special tools are required. Use a standard precision screwdriver compatible with your specific machine screws.
5. **Torque Application:** Carefully tighten the fasteners. **Do not over-torque.** Nylon is softer than metal; applying excess torque will crush the washer, deform its shape, and severely compromise the stability of the mount.

Applications

- **Sensitive Electronics Assembly:** Providing a non-conductive barrier to prevent metal screws from shorting circuit board traces or scratching solder masks.
- **Drone & UAV Manufacturing:** Isolating flight controllers and power distribution boards from highly conductive carbon-fibre drone frames.
- **Computer Hardware Builds:** Insulating standard PC motherboards from metal chassis standoffs.
- **IoT & Hobbyist Projects:** Providing low-voltage DC electrical isolation for custom modules, sensors, and development boards.
- **Mechanical Spacing:** Acting as shock-absorbing, corrosion-resistant spacers for light-duty mechanical linkages and robotics hardware.

Important Notes

1. **Torque Limits:** *Nylon is noticeably softer than metal. Do not over-torque your screws, as this will crush the washer, deform its shape, and compromise the physical stability of your assembly.*
2. **Thermal Limits:** *Nylon is a thermoplastic and will soften or melt at elevated temperatures. Do not use these washers in direct contact with 3D printer hotends, massive power-dissipating heatsinks, or high-temperature components.*
3. **Electrical Safety Scope:** *While nylon is an excellent insulator, this kit is strictly intended for low-voltage DC hobbyist and IoT electronics. It is not to be used for mains AC isolation or high-voltage circuits.*
4. **ESD Limitations:** *These washers provide direct physical electrical isolation preventing shorts, but they are not specialized anti-static (ESD-dissipative) components.*
5. **Kit Exclusions:** *This assortment box contains only the 1,150 insulating nylon washers. Matching metal machine screws, nuts, or standoffs must be purchased separately.*

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