Plastic Washers

Plastic washers are low-friction spacing components commonly used in FRC to reduce wear, prevent metal-on-metal contact, and fine-tune alignment in assemblies. West Coast Products (WCP) offers commonly used versions designed for FRC mechanisms.

What They Do

Plastic washers are placed between moving or clamped components to:

- Reduce friction between metal parts
- Prevent scratching or galling of aluminum surfaces
- Act as precise spacing shims
- Improve smoothness in rotating assemblies

Why Teams Use Them

Compared to metal washers, plastic washers:

- Are lighter
- Reduce wear on aluminum and steel parts
- Provide smoother sliding surfaces
- Help eliminate binding in tight assemblies

Common Applications

- Shaft assemblies with gears, sprockets, or pulleys
- Bearing stacks and spacing control
- Pivot joints in arms or linkages
- Low-friction interfaces in sliding mechanisms

Material Properties

Plastic washers (such as those from WCP) typically:

- Have low friction surfaces
- Compress slightly under load for fine adjustment
- Do not corrode or seize like metal-on-metal contact
- Wear faster than metal but are easily replaceable

Best Practices

- Use plastic washers where parts rotate or slide against each other
- Avoid over-compressing them in high-load structural joints
- Combine with proper spacers for precise alignment
- Replace if they become excessively worn or deformed

Key Idea

Plastic washers are used in FRC to reduce friction and wear while improving spacing accuracy in moving assemblies, making mechanisms smoother and more reliable over time.

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