

PLA Filament Spools

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Consumables & Spares



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PLA is the standard 3D printing filament for schools: easy to print, low odour, stiff and available in many colours, but it softens in heat and is not UV-resistant. Spools come in 1.75 mm diameter with 0.5-1 kg per spool.

Key Features

- 1.75 mm diameter standard
- Print temperatures 190-220 degrees C
- No heated bed strictly needed
- Many colours and finishes
- Biodegradable under industrial conditions

Typical Uses in the Workshop

- Print prototypes and models quickly
- Teach first-layer and slicing skills
- Produce jigs, enclosures and parts
- Classroom printing in volume

Safe Operation

1. Dry the spool if it has absorbed moisture
2. Set the nozzle temperature for the brand
3. Check the first layer sticks before leaving
4. Store the spool on the holder with free spooling
5. Remove prints once the bed cools

SAFETY NOTES

- The nozzle and bed are hot - keep hands clear
- Vent the room during printing
- Do not leave spools where children can pull them
- Keep filament away from heat sources
- Store spools upright to avoid tangles

Maintenance & Consumables

- Keep spools in dry storage or a dry box
- Check for tangles before printing
- Clean the nozzle after colour changes
- Store spools sealed with desiccant
- Recycle failed prints where facilities exist

Specification & Buying Notes

Buy PLA in bulk spools of the most used colours (white, black) plus smaller spools of accent colours. Premium brands string less and flow more reliably. Check the make and model chip if using a locked system.