ABS Filament Spools

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

Photo: Tat?r Lehel — CC BY-SA 3.0 — via Wikimedia Commons (ABS_filament_spool.jpg)

ABS is a strong, tough 3D printing filament known for its durability and temperature resistance, printing at 220-250 degrees C on a heated bed inside an enclosure. It is the material for functional and engineering parts, but it shrinks and fumes, so classroom use needs care.

Key Features

- Print temperatures 220-250 degrees C
- Heated bed and enclosure recommended
- High impact strength and toughness
- Better heat resistance than PLA and PETG
- Smooth, sandable and paintable finish

Typical Uses in the Workshop

- Print durable parts and enclosures
- Make parts that see heat and knocks
- Prototype and model components for mechanisms
- Post-process with acetone vapour smoothing

Safe Operation

1. Dry the filament if it has absorbed moisture
2. Use an enclosure to control draughts
3. Print on a heated bed with adhesion aids
4. Set retraction to reduce stringing
5. Let parts cool slowly to avoid warping

SAFETY NOTES

- ABS fumes are irritants - ventilate the room
- The hotend and bed are very hot
- Keep plastic away from open flames
- Use a filter or vent when printing ABS indoors
- Do not breathe printing fumes

Maintenance & Consumables

- Store spools sealed and dry
- Clean the nozzle and bed frequently
- Check the enclosure seals for drafts
- Replace the PTFE tube at the higher temps
- Keep the filament path clear of dust

Specification & Buying Notes

Buy ABS only if the printers have enclosures and ventilation. Quality brands print with less stringing and warp. Keep PLA as the default and ABS for specific functional needs.