

Identification Tests

| Resin | Burning | Odour after extinguishing the flame | Melting Point °C | Glass Transition °C |
|-------------------------------|--|-------------------------------------|--------------------|---------------------|
| Polyacetal homopolymer | Blue flame; no smoke; drippings may burn | Formaldehyde | 175 | |
| Polyacetal copolymer | Blue flame; no smoke; drippings may burn | Formaldehyde | 165 | |
| Polyacrylate & Methylacrylate | Blue flame; yellow top | Fruit like | | 110-135 |
| ABS | Yellow flame; black smoke; drips | Characteristic* | | 105-115 |
| SAN | Yellow flame; black smoke; clumps of carbon in the air | Illuminating gas and acrylonitrile | | 115 |
| PMMA | Blue flame; yellow top; drippings may burn | Fruity | | 110-135 |
| Polyethylene LD & HD | Blue flame; yellow top; drippings may burn | Paraffin (blown out candle) | LD: 105 HD: 115 | |
| Polyester PBT | Yellow flame; smoke; drips | Sweet Characteristic* | 225 | |
| Polyester PET | Yellow flame; smoke; drips | Sweet Characteristic* | 254-260 | |
| Polypropylene | Blue flame; yellow top; swells and drips | Sweet | 168 | |
| Polystyrene | Yellow flame; dense smoke; clumps of carbon in the air | Illuminating gas Characteristic | | 90-100 |
| Polyvinyl Acetate | Yellow flame; smoke | Acetic Acid | | |
| Polyvinyl Alcohol | Yellow flame; smoke | Characteristic* | | |
| Polyvinylbutyral | Yellow flame; smoke | Rancid butter | | |
| Polycarbonate | Decomposes | Characteristic* | | 150 |
| PPE + PS | Yellow flame; dark smoke | Characteristic* | | |
| Polyamide 6.6 | | | 254-260 | |
| Polyamide 6 | | | 218 | |
| Polyamide 6.12 | Blue flame; yellow top; melts and drips | Burnt wood; Formic acid | 213 | |
| Polyamide 11 | | | 185 | |
| Polyamide 12 | | | 175 | |
| Polyvinylchloride | Yellow flame; green at edges; softens and chars | Hydrochloric Acid | | 75-105 |
| PFEP | | | 274 | |
| PTFE | Deforms | | 327 | |
| PETFE | | | 267 | |

* Odours are difficult to describe, but recognisable - use controls (known samples).