

## Temperatures at which different materials burn or melt

It is easy for the TV news to fool an uneducated people. (No insult intended, as knowing burning temperatures is a specialty)  
 Charts from T.C. Forensic: <http://www.tforensic.com.au/docs/article10.html#2.1.1>

### Woods

Reactions to temperature exposure	
Reaction	Temperature (Celsius)
Wood slowly chars*	120°-150°
Decayed wood ignites	150°
Ignition temp of various woods	190°-260°
Paper yellows	150°
Paper ignites	218°-246°
Oil soaked lagging ignites	190°-220°
Leather ignites	212°
Hay ignites	172°
Coal ignites	400°-500°

\* wood chars at a rate of approximately 30-50 mm/hour

### Steel

Appearance	Temperature
Yellow	320°
Brown	350°
Purple	400°
Blue	450°

\* loses 50% of its structural strength and sags at 550°  
 \* melt point of steel 1100°-1650°

### Mineral Wool Insulations

Effect	Temperature
Resin chars & slowly blackens	288°
Resin chars quickly	400°
Fibers becomes light gray	482°
Fibers fuse	593°
Fibers melt	649°

**Ceramics** generally can withstand very high temperatures, such as temperatures that range from 1,000 °C to 1,600 °C (1,800 °F to 3,000 °F).

Ceramic - Wikipedia  
<https://en.wikipedia.org/wiki/Ceramic>

### Plastics

Melting points and ignition temperatures		
Plastic	Melting Point Range	Ignition Temperature
ABS	88°-125°	416°
Acrylics	91°-125°	560°
Cellulosics	49°-121°	475°-540°
Nylons	160°-275°	424°-532°
Polycarbonate	140°-150°	580°
Polyesters	220°-268°	432°-488°
Polyethylene ld	107°-124°	349°
Polyethylene hd	122°-137°	349°
Polypropylene	158°-168°	570°
Polystyrene	100°-120°	488°-496°
Polyurethanes	85°-121°	416°
PTFE	327°	530°
P.vinylideneclor	212°	454°
PVC	75°-110°	435°-557°
Wool		228°-230°
Cotton		250°
Rubber		260°-316°

### Glass

Effect	Soda	Borosilicate
Very slight distortion	700°	750°
Slight distortion	750°	800°
Considerable distortion	800°	850°
Medium fluid flow	850°	900°
Liquid flow	900°	950°

\* glass thermally cracks at 90°-120°

### Judging a fire's temperature by its color:

color	approximate temperature		
	F	°C	K
dark red	1000	538	773
blood red	1075	580	860
dark cherry	1175	635	910
medium cherry	1275	690	995
cherry	1375	745	1020
bright cherry	1450	790	1090
salmon	1550	845	1115
dark orange	1630	890	1160
orange	1725	940	1215
lemon	1830	1000	1270
light yellow	1975	1080	1365
white	2200	1205	1480

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### Metals

Metal	Melting Point	Flame Colour
Aluminium	660°	Colorless
Copper	1080°	Green (o) Red (r)
Lead	327°	Colorless
Tin	232°	Colorless
Bismuth	271°	Colorless
Zinc	419°	Colorless
Aluminium alloy	600°	Colorless
Antimony	630°	Colorless
Magnesium	651°	Colorless
Brass	900°-1000°	Green (o) Red (r)
Silver	961°	Colorless
Bronze	1000°	Green (o) Red (r)
Gold	1063°	
Cast iron	1200°-1350°	Yellow-brown
Manganese	1260°	Violet (o)
Nickel	1450°	Brown-Red
Cobalt	1490°	Blue
Steel	1100°-1600°	Brown-Red
Platinum	1770°	
Titanium	1670°	
Chromium	1900°	Green
Tungsten	3410°	
Solder 60/40	183°	
Electric fuses	371°	
Carbon	3730°	
Pure iron	1535°	

### Concrete/Cement

Appearance	Temperature
Reddish pink - reddish brown	300°
Gray	300°-1000°
Buff	>1000°
Sinters and yellowish	>1200°

\* sand and sandstone becomes friable at 573°  
 \* wall masonry collapses at 760°