







Fire Safety Technical Guide 	 <b>USER GUIDE TO THE CLASSIFICATION OF          FIRES FOR EXTINGUISHING PURPOSES</b>
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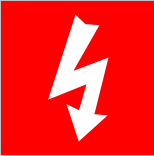

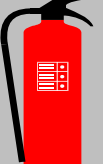


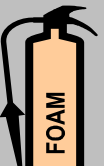
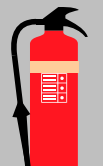



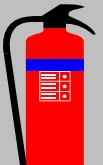




## 1.0. CLASSES OF FIRES

1.1. Unfortunately, there is not a universal fire-extinguishing agent and therefore there is a possibility that using particular types of fire extinguishers on ignited materials or liquids may make the fire considerably worse and place the fire fighter at risk. Under British Standard EN-2 (Classification of Fires), fires have been divided into broad classifications for extinguishing purposes. This will assist in selecting the most effective fire-extinguishing agent to be used, on the most appropriate type of fire and burning material.

SIGN, COLOUR & PICTOGRAM	CLASSIFICATION OF FIRES
 Wood / Furnishings etc	<p><b>CLASS A:</b></p> <p>All solid materials, usually organic origin nature (contains compounds of carbon) and generally produce glowing embers - i.e. wood, textiles, curtains furniture and plastics.</p>
 Flammable Liquids & Solids	<p><b>Class B:</b></p> <p>All flammable liquids and solids, which can also be sub-divided into:</p> <ul style="list-style-type: none"> <li>• <i>Non-miscible (non-Polar) with water (i.e. petrol, oils, solvents, paints &amp; waxes);</i></li> <li>• <i>Polar Liquid Fires (Hydrophilic/Miscible) with water (e.g. alcohol, methanol, acetone, propanol, etc.) - sometimes known as Polar Liquids;</i></li> </ul> <p><b>Note: Hydrophilic</b> = having an affinity with water / <b>Miscible</b> = 'capable of being mixed' ordinary foams are designed to work on non-polar flammable liquids such as petrol, but may break down too quickly in polar liquids such as alcohol or glycol. Facilities that handle large amounts of flammable polar liquids use specialised "alcohol resistant foam" instead.</p>
 Fires involving Gases	<p><b>CLASS C:</b></p> <p>Class 'C' fires involve Natural Mains Gas, Liquid Petroleum Gases (LPG) such as Butane &amp; Propane etc.</p> <p>This class includes Medical or Industrial gases.</p>

SIGN, COLOUR & PICTOGRAM	CLASSIFICATION OF FIRES
 <p data-bbox="204 748 389 808">Fires Involving Metals</p>	<p data-bbox="456 338 571 365"><b>CLASS D:</b></p> <p data-bbox="456 383 1414 450">Class 'D' fires involving metals or powdered metals etc (where water is generally ineffective and / or dangerous).</p> <p data-bbox="456 468 1414 723"><b>Specialist Dry Powders</b> - are produced for certain Metal fires particularly those involving alkali metals such as Sodium &amp; Potassium. These dry powders extinguish metal fires by fusing the powder to form a crust, which excludes oxygen from the surface of the molten metal. A specific agent is added to prevent the powder from sinking into the surface of the molten metals. Some Class D extinguishing agents include finely granulated sodium chloride, copper and graphite applied by an extinguisher, shaker, scoop or shovel.</p> <p data-bbox="456 741 1414 902"><b>M28 type</b> - 9Kg dry powder fire extinguisher these extinguishing agents are suitable for sodium, potassium, magnesium, titanium, aluminium, and most other metal fires. This particular fire extinguisher <b>is not suitable</b> for fire involving Lithium. Normally used with a low velocity discharge applicator.</p> <p data-bbox="456 920 1414 1016"><b>L2 type</b> - 9Kg dry powder fire extinguisher is suitable for metal fires involving Lithium. Normally used with a low velocity discharge applicator.</p>
 <p data-bbox="236 1357 357 1384">Electrical</p>	<p data-bbox="456 1043 612 1070"><b>ELECTRICAL:</b></p> <p data-bbox="456 1088 1414 1317">Electrical fires are not considered to constitute a fire class on their own, as electricity is a source of ignition that will feed the fire until removed. When the electrical supply has been isolated, the fire can be treated (generally) as 'Class A' for extinguishing purposes. However, you should always isolate the supply before fighting the fire; if this is not possible then a non-electrical conducting extinguishing agent is to be used regardless of the power status, <b>on all occasions</b>.</p> <p data-bbox="456 1335 1414 1496"><b>Warning Note</b> - some electrical equipment can store in capacitors, lethal voltages even if their power supply has been isolated. Always use extinguishers containing a non-electrical conducting extinguishing agent specifically designed for use on electrical equipment such as Carbon Dioxide (CO<sub>2</sub>) or Dry Powder.</p>
 <p data-bbox="213 1778 379 1877">High Temperature Cooking Oils</p>	<p data-bbox="456 1532 564 1559"><b>CLASS F:</b></p> <p data-bbox="456 1576 1414 1706">New class specifically dealing with high temperature (<math>\geq 360^{\circ}\text{C}</math>) cooking oils used in large industrial catering kitchens, restaurants and takeaway establishments' etc. Cooking oil fires, because of their high auto-ignition temperatures, are difficult to extinguish.</p> <p data-bbox="456 1724 1414 1921">Conventional extinguishers are not effective for cooking oil fires, as they do not cool sufficiently or may even cause flash back, thereby putting the operator at risk. These extinguishers contain a specially formulated wet chemical which, when applied to the burning liquid, cools and emulsifies the oil, extinguishing the flame, sealing the surface and preventing re-ignition.</p>

## Extinguisher Quick Guide (Always check manufacturer's instructions & specifications):

						
Old Colour BS 5406	New Colour BS EN3	Class A Paper or Wood etc.	Class B Flammable Liquids	Class C Flammable Gas Fires	Class D Metal Fires	Electrical Fires
		<input checked="" type="checkbox"/>	Do Not Use <input type="checkbox"/>			Do Not Use <input type="checkbox"/>
	*6 Litre - Water Mist multi- purpose extinguish er	<input checked="" type="checkbox"/>	*Note - can be used on up to 21 Litres (21B rating). <input checked="" type="checkbox"/>			*Note - safe to use on up to 35Kv <input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	Do Not Use <input type="checkbox"/>			Do Not Use <input type="checkbox"/>
		Note: Multi-Purpose Foams may be used. <input checked="" type="checkbox"/>	Note: Specialist Foams (Polar) required for industrial alcohol. <input checked="" type="checkbox"/>			Do Not Use <input type="checkbox"/>
			Secondary <input checked="" type="checkbox"/>			Primary <input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	Note: specialist dry powder required for Solvents & Esters (Monnex). <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Note: specialist dry powders may be required (M28 / L2): <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			Primary <input checked="" type="checkbox"/>	General Note - may be used in conjunction with other extinguishing agents / or fire extinguishing techniques.		
	*75F Rating 		<b>SPECIALIST HOT COOKING OIL FIRES ONLY</b> 6 Litre Class F extinguisher specifically for dealing with large high temperature (360°C+) cooking oils used in large industrial size catering kitchens, restaurants and takeaway establishments with deep fat frying facilities.  *Water Mist Safe to use on Class F fires - this includes small domestic size containers of high temperature (360°C+) cooking oils used in food frying (this unit has a 75F rating).			

\*UCL uses Series E 6 Litre Water Mist Units produced by Jewell Sapphire Ltd.