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Useful web links

How stuff works

Learn more about the material finishes from how stuff works website.

View the tep web page >>

Technology student

Revise about symbols that appear on paint containers.

View the technology student site >>

Material finishes

Material finishes overview

Most materials will require an exterior finish to improve the look of the material and to protect it from the environment. Surface finishes can be applied by numerous methods including brushing, spraying and dipping. The main surface finishes that are available include paints, varnishes and lacquers, oils, polishes, stains, sanding sealer, plastic dip coating, powder coating, anodising, plating, galvanising, enamelling, polishing and self finishing.

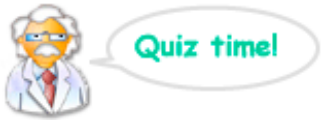
Finishes are usually applied for one or more of the following reasons:

1.) To protect the material from moisture, wear, abrasion, fungus, mould or insect attack.
2.) To change the materials appearance, its colour or texture.
3.) To enhance the materials durability, surface hardness or other properties.

Read the surface finishes overview table below to learn more:

Type of finish	Material	Description	Examples
Paints	Metals Wood	Paints: are usually suitable for metals or timber but not plastics. Paints are divided into three main groups oil based paints, water based paints and solvent based paints.	Car bodies, lawn mowers, tools, etc.
Varnishes and lacquers	Wood (*Metals)	Varnishes and lacquers: are available in oil, water and solvent based types. They are used on woods (*) however some special types exist for metals.	External wood- boats/ yachts, furniture. Internal furniture, etc.
Oil	Wood Metal	Oil: Various types exist for metals or woods. Oil provides an improved appearance for wood by enhancing the grain. Vegetable oil can also be applied to wood which comes in contact with foods. Oil is also used on metals to protect it from rust.	Wooden spatulas, salad servers, Guns, engineering products.
French polish	Wood	French polish: is applied to wood by using a brush and cloth to add several layers which provides a deep finish. Wax is then applied to improve the shine.	Internal furniture only.
Wood stains	Wood	Wood stains: are used to improve the colour of the wood. Wood stain if used on its own only colours the wood and so and requires a coating of wax or varnish to make it weather proof.	Benches, sheds, fences, etc.
Sanding sealer	Wood	Sanding sealer: is like varnish which is used to seal wood to moisture. Sanding sealer is good as a first coat before applying varnish or wax.	Internal furniture only.

Plastic dip-coating	Metal	Plastic dip-coating: Plastic powder is used for dip coating. The metal is heated and is then dipped in a plastic powder eg: coat hooks.	Tool handles. Garden equipment, hooks, etc.
Powder coating	Metal	Powder coating: like dip coating but it is a more sophisticated process used in industry. The powder is sprayed onto products which run through an oven.	Metal desk frames, chairs, internal car parts
Anodising	Metal	Anodising: is a process used on aluminium to provide a hard-wearing corrosion-resistant finish. Anodising involves electrolysis and uses acids and electric currents.	Used on aluminium products.
Plating	Metal	Plating: is another process used on aluminium which uses electrolysis. A thin plating layer of metal on the surface provides a durable finish to metals which are prone to corrosion.	Bike wheels, kitchen equipment, car parts, nuts/ bolts/hinges where appearance is important.
Galvanising	Metal	Galvanising: involves dipping metal into a bath of molten zinc. The zinc provides a good corrosion resistant finish.	Gates, buckets, nuts and bolts, screws, hinges, nails.
Self-finishing	Plastics	Self-finishing: Many plastic products are self finished for example injected moulded products. This means the product does not need a finish.	Injection mouled products.
Enamelling	Metal	Enamel: A powdered glass is melted and fused onto the metal. This requires high temperatures. This finish is very heat resistant.	Jewellery, baths, pots and pans, oven liners.
Polishing	Metals Plastics	Polishing: By hand or with machines to produce a shine. This is not a durable finish and the metal may tarnish or oxidise again in the future. Chemical polishes such a 'Brasso' use a liquid borne abrasive to raise a shine.	Jewellery, brass, copper and bronze ornaments. Lacquer can be applied to prevent oxidisation.



Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, dont forget to write your name on the sheet!:-

1). Why are finishes usually applied?
2.) Name three metal finishes?
3.) Name three wood finishes?
4.) Name two plastic finishes?
5.) Name some products that wood stains are used on?
6.) Name some products that enamelling is used on?
7.) What is plastic dip-coating?
8.) How is french polish applied to furniture?
9.) What else should you use with sanding sealer?
10.) What oil should you use on wood which comes in contact with foods?