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Having Difficulty in Removing Stains?

Stain removal is still a genuine craft and calls for a higher degree of skill and knowledge than almost any other process undertaken by the professional cleaner. The stain removal area should be clean, well ventilated and have good lighting, producing no glare or shadow, but give good illumination for examining work and detecting and removing stains.

It is also essential that the total area, including floor, equipment, pipework, lighting, and the operator's hands should be clean, to prevent the pick up of further soiling, on an already clean item, causes further work.

Proficiency in the handling of stain removal equipment is a considerable asset in spotting (the art of stain removal), and all mechanical equipment is useful, but may not always be essential for the removal of some stains. However, good basic tools and surroundings can produce orderliness and cleanliness, which will add up to pleasant working conditions.

Safety equipment to hand must include –solvent proof gloves, a breathing mask, safety goggles, and protective clothes. All of these products are available from allied trade companies, many of whom can be seen at the Guild Conferences and Exhibitions held twice per year. An observance of COSHH (Control of Substances Hazardous to Health) regulations is a legal requirement for employed staff. Many chemicals used in stain removal are listed hazardous substances and therefore require a written risk assessment to be carried out by an appointed competent H&S officer. If the company does not appoint the H&S officer, by default the employer is responsible.

Duty of Care waste regulations will also be applicable to the machine waste residue and other contact materials. Chemicals must be stored correctly and made safe while not in use. Those that do not co-habitat well must be identified and stored apart. Chemicals of a hazardous nature must have risk assessments that identify limitations and safe use.

Risk assessment documentation together with chemical manufacturers data sheets must be stored in an appropriate indexed document portfolio and stored in a place accessible to all employed staff. All staff should be aware of the risks and safe procedures that are in place.

It is recommended that you obtain the Guild's guide to stain removal titled "Stain Removal for Dry Cleaners and Launderers" from the Guild's secretariat enquiries@gcl.org.uk and this is a comprehensive guide containing a full description of equipment, stains, and removal methods.

Ancillary Equipment required include the following:-

1. Spatulas - these are flat pieces of metal, bone or plastic, about 20 cms long and 3 cms wide, used for working chemicals into fabrics, or to assist in lubrication of stains. They should have smooth edges and rounded ends, but never points. Chemically resistant plastic or bone are best since metal spatulas tend to become sharp and dangerous to fabrics.
2. Brushes—A good stiff brush should be used for removing mud and other dried debris. Long handled brushes having nylon bristles with rounded ends should be used for tamping and applying various reagents. The use of soft bristle brushes is advisable for more delicate fabrics. It is sensible to keep separate brushes for wet and dry work and separate brushes for light and dark work.
3. Absorbent Materials—Cheese cloth, terry toweling, chamois leather, paper tissues or any other clean absorbent material, preferably white is useful for mopping up excess water or chemicals.
4. Bowls - are useful for holding various liquids or solutions. They should be about 1 litre capacity.
5. Chemicals - all chemicals should be kept in closed polythene or glass bottles and should be clearly and permanently labeled. Only half filling the bottle will help to prevent unwanted splashes in use.
6. Chemicals used are referred to as "dry side" and "wet side" and are applicable to both dry (solvent) cleaners and wet cleaners, and as well as the kit type stain removers (3 or more bottle kit from allied trades), there are other very useful aids that should be added on page two:-

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WET-SIDE CHEMICALS

1. Water - preferably distilled or softened water should be used.
2. Neutral detergent - any neutral liquid detergent can be used.
3. Glycerine - neutral syrupy liquid which can act as a lubricating agent on the wet side and can be purchased from your local chemist's shop.
4. Acetic Acid - a weak organic acid usually used as a 10 % solution in water. It can be used to neutralise alkalis and may restore colour changes caused by alkalis.
5. Ammonia - is a gas, but the product used in spotting is a solution of the gas in water. It is an alkaline solution with pungent choking fumes and often assists water and detergents. It is useful for speeding up the action of hydrogen peroxide bleach and can be used to neutralise acids. Usually used as a 5 % solution for spotting.
6. Bar soap - is alkaline, and is a very useful material to rub into and on to many types of resistant stains including ingrained soiling.
7. Digesters - are enzyme products and are used to convert proteins and some carbohydrates, for example many food stains, into water soluble substances which can then be removed by further spotting treatments.
8. Hydrogen peroxide - is an oxidising bleach normally used at 9% . It may de-colourise some dyestuffs, therefore coloured fabrics should be tested before spotting. Hydrogen peroxide can be used on wool and silk as well as cellulosic materials. Peroxide can be bought off the shelf at pharmacies at 9% strength in 200ml bottles and it is better to buy it this way because it is cheaper and due to its poor shelf life is far more cost effective.

Wet side stains and treatments are water bound and almost all food stains will be water bound and therefore treatable with reagents containing water, detergents, co solvents, and emulsifier. Some will be pH neutral, some acidic and others will be alkali preparations depending on the intended use. Protein removers and tannin removers are typical wet side.

Methods used in stain removal - There are 5 basic methods, employing various pieces of equipment, solvents, and chemicals.

Mechanical action - Using controlled force to break up and suspend raised or built-up portions of stains and in some cases helping to release absorbed stains. The spatula must never be used with pressure but rather with a surface smoothing action. Always keep a piece of 00 emery paper to rub off any sharp edges on the bone spatula.

Solvent action - A substance, which has the power of dissolving or diluting other substances, is a solvent. Under this definition, water is also a solvent. Stains that have carbohydrates in their make up such as sugar and starches are dissolved or at least diluted with water. This is referred to as wet-side solvent action. Oils, paints, lacquers and lipsticks are dissolved or weakened in dry solvents like perchloroethylene, amyl acetate, hydrocarbon etc. these are dry side solvents.

Lubrication & softening - Softening pigment stains with solid particles together with supplying an absorbent carrier to prevent re-deposition and spreading. In addition, a lubricant prevents wear and chafing to the fibre during the application of mechanical action.

Chemical action - Some stains need to be made soluble by reaction with specific chemicals. Bleaches work with chemical action. Care must be taken when applying chemicals for this purpose. Rust remover for example can completely dissolve some metallic threads.

Digestion Enzyme - A catalytic substance secreted by living organisms which brings about chemical changes such as digesting starch to cause a change into water-soluble compound, converting sugar into alcohol. Enzymes are used in desizing. Enzymes are also used by the spotter to convert albumin proteins into soluble sugar substance, which is then soluble in water. All digestive agents used in the laundry and dry cleaning industry are enzyme based. Activity encouraged by inducing warmth, it will always require time to work. **The presence of either acid or alkali spotting agents will destroy the enzymes. All spotting agents must be rinsed out using distilled water before digesters are applied to the fabric.**

Some everyday difficult stains:-

Tea and Coffee stains. Always treat before cleaning.

Coffee stains are only slightly different to tea and the approach of removal is similar, and both leave a brown to grey-brown absorbed stain with a darker perimeter if milk is present. Heat or alkali sets this stain so do not use the steam gun or any alkali (ammonia solutions) as first treatments. It is advisable to apply a digester (blood remover) as first method of treatment to remove the milk. If the digester treatment has no effect flush out with cold distilled water and then apply a tannin kit formulation or acetic acid. If the garment is white, you may use 3 % hydrogen peroxide to remove the last traces of colour.

Fruit Juices and Cola drink. Kit - Tannin remover. Treat before cleaning.

Yellow to light brown turning to dark brown with age. Any traces left behind use 10 % acetic acid.

Curry. Always treat before the cleaning process. Kit - Tannin remover.

Built up and absorbed, has a powdery surface, yellow to brown in colour turning white when scratched. Constituents made into a powder/paste of turmeric, which is also a vegetable dye, which makes this a difficult stain to remove.

Use tannin remover kit as first treatment, if a yellow coloured stain remains, apply 10 % Hydrogen Peroxide (test for colour fastness first). Allow time for oxidation to take place. If the turmeric content has been allowed to set, it may not be possible to