- One hard object strikes with another object, e.g. steel against steel, steel against stone, etc.
- Electrical current is switched **ON or OFF**; static electricity is generated and/or discharged.
- When certain liquids are poured from one container into another static electricity is generated.

Static electricity builds up even when certain liquids are conveyed at high speeds through hoses. It is essential that all containers, pedals, stirrers, spray guns, pipes, etc are fully and properly earthed.

When working in closed and confined areas, proper ventilation must be maintained to exhaust the solvent vapours. A mixture of solvent and air will ignite in presence of flame spark or heat. Thus the area should be adequately ventilated to avoid build up of solvent concentration which can result into fire or explosion.

Even with ventilation, at times, it is not possible to exhaust all the solvent vapours. Thus in addition to proper ventilation, it is a must that naked flames, sources of sparks and heat, smoking, etc. are not permitted in the working area.

Rags etc. soaked with solvents should not be left lying around, or in the pockets of working clothes. They should be discarded suitably. Accumulation of paint soaked rags in a heap can build up heat within the pile resulting in self-ignition.

Painting may leave behind residues which are inflammable in nature. If allowed to accumulate, the chances of fire increase many folds. The use of iron or steel scrappers for removal of these deposits should be discouraged. Use of iron or steel scrappers in itself can result into sparks, thereby defeating the whole process of removal of the residue.

The best way to prevent the chances of fire is :

1. Keep empty cans and drums closed.
2. When working in closed areas, without proper ventilation, draw off the air along the floor periodically as the solvents are heavier than air and thus they settle down.
3. Rags, etc. soaked with paints, solvents, etc. should be disposed off suitably.
4. Prohibit the presence of heat source in the working area.
5. Prohibit smoking in working area.
6. Ground / Earth all the containers, platforms, pipes, house, etc.
7. Use Flame-Proof equipment only and maintain efficient earthing. No smoking, naked lights or other sources of sparks / ignition should be permitted.
8. Store and use in accordance with Petroleum Regulations.

In the event of a fire involving paints :

- DO NOT TRY TO EXTINGUISH THIS FIRE WITH WATER. SOLVENTS BEING LIGHTER AS COMPARED TO WATER FLOAT ON IT, HELPING THE SPREAD OF FIRE.
- USE DRY CHEMICAL, FOAM OR CO_2 EXTINGUISHERS.
- USE BREATHING APPARATUS IN THIS SITUATION.
- DO NOT DIRECT CO_2 FIRE EXTINGUISHERS AGAINST PERSONS. USE BLANKETS ETC. TO PUT OFF THE FIRE.

Disclaimer

The recommendations given are on the basis of technical data available and from our field experience. The user is requested to verify and ascertain the same before applications. Our technical advise - whether verbal or in writing is given in good faith but without any warranty or liability on our part for the same. It does not release you from the obligation to ascertain the suitability of the method / procedure before implementing the same. We accept no liability from the resulting loss or damage, if any, arising out of following the guidelines given here. Local Regulations and procedures, as directed by the concerned authorities and tendering authorities must be followed.

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HEALTH & SAFETY

Good housekeeping practice and sensible working can assure total safety.

The following factors have to be considered when using paints / coatings :

1. Danger to Health
2. Danger of Fire and Explosion.

Danger To Health

Hazards to health comprise of :

- Contact with skin and eyes,
- Inhalation,
- Ingestion.

The following precautions will result into maximum working safety and thus in preserving health.

1. Use eye protection and dust mask during the manual surface preparation. When sand blasting, the use of air fed mask is advised.
2. For paint application in confined areas, ensure proper ventilation to exhaust the solvent fumes. If ventilation is not possible, use air fed mask. Do not cover the mouth with common clothes or rags as these can get soaked with paints, and are not at all good as air filters.
3. Do not exhaust the solvent fumes in a manner which will effect other working areas. These solvent fumes are heavier than air, driving the breathable air upwards and themselves flowing down.
4. Wear working clothes covering the body to the maximum possible extent. Also use gloves and eye shields. Clean eye shields frequently, to remove the paint mist. Do not touch eyes, mouth, nose, etc. with gloves.
5. Rings, watch, etc. should be removed before starting application as these can trap solvents or paints, resulting in prolonged skin contact.
6. If thinner or paint has splashed in the eyes, wash them copiously with clean fresh water for at least 10 minutes and take medical advice immediately.
7. In the event of paint spillage on skin, if necessary remove it by lightly swabbing it with a solvent soaked rag, wash it with soap and water or any suitable industrial cleaner meant for the purpose.
8. Wash hands and rinse the mouth with fresh water immediately after painting.
9. If available and possible, suitable non greasy barrier cream should be applied on the skin, wherever it is exposed.
10. If the clothes are soaked with paint or thinner, change them immediately and wash with soap and water.

The best ways of preserving health poisoning:

- Ensure good ventilation in confined areas. Provide required minimum forced air input for every litre of paint applied.
- Operators applying the paint in confined areas should wear proper, personal protective equipments like Air-Fed Masks, Safety Glasses, etc.
- Protect face, neck and wrists from over spray. Identify and use a suitable barrier cream and / or disposable gloves.
- Remove skin contaminants with resin removing cream. Wash regularly with soap and water.

Danger of Fire and Explosion

Conditions conducive for fire break-out :

- Presence of combustible matter.
- Presence of oxygen.
- Presence of heat.

Paints generally contain flammable solvents; oxygen is present in the working atmosphere and air. The only factor not present naturally is heat. Thus heat is the only factor which can be controlled if fire and explosion are to be averted.

Sufficient heat to start a fire can be given out by a spark. Presence of naked flame, electrical appliances etc. in the painting area can be prohibited, controlled and even discounted. Spark, then is the most dangerous factor. Sparks are generated when:

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