

Chemical Handling and Storage Guidelines

| | IRRITANT OR HARMFUL | | | POISONOUS & TOXIC | | OXIDIZER | | CORROSIVE | | FLAMMABLES |
|-------------------------------|---|--|--|--|--|---|--|---|--|---|
| SYMBOL | | | | | | | | | | |
| COLOR CODE | Green Gray Orange | | | Blue | | Yellow | | White | | Red |
| ADDITIONAL HAZARD | | | | | | | | | | |
| QUALITIES | Moderate or slight hazard. 1. Harmful if swallowed. 2. Irritating to eyes and skin. 3. This symbol covers a wide range of (sometimes relatively minor) hazards – with precautions such as avoid contact with the skin, do not breathe, etc. – best to refer to relevant data sheet for details. | | | Health Hazard 1. Avoid skin and eye contact and breathing in vapor. 2. Do not swallow nor make any contact with mouth. 3. Avoid Inhalation. | | Reactivity Hazard 1. Oxidising chemicals are materials that spontaneously evolve oxygen at room temperature or with slight heating, or that promote combustion. 2. To be kept away from flammable chemicals at all costs! 3. Harmful if swallowed. 4. Direct contact may cause burn. | | Contact Hazard 1. Harmful by inhalation and if swallowed 2. Skin & eyes contact may cause irritation & burn. | | Fire Hazard 1. Easily ignites when a source of ignition is present. |
| CHEMICALS | Enzyme, Liquid Detergent, Powder Detergent, Softeners, Fixing Agents, | | | Soda Ash, Sodium Bicarbonate, Optical Brighteners, Powder Dyestuff, Liquid Dyestuff, Sodium Sulfate | | Hydrogen Peroxide, Bleaching Liquid, Bleaching Powder, Potassium Permanganate | | Caustic Soda, Citric Acid, Oxalic Acid, Acetic Acid, Phosphoric Acid, Hydrochloric Acid, Sulfuric Acid, | | Perchloroethylene (solvent), oil and fuel |
| HANDLING AND SAFETY AWARENESS | 1. Never mix with acid chemicals. 2. Ensure ventilation is adequate. 3. Wash hands after every use. 4. Remove contaminated clothing and wash before reuse. | | | 1. Do not eat, drink or smoke while handling the chemical. 2. Wash hands after use. 3. Ensure ventilation is adequate 4. Remove contaminated clothing and wash before reuse. 5. Store according to the nature of the chemical, using appropriate security where necessary. | | 1. Store under cool temperature, avoid direct sunlight. 2. Remove all contaminated clothing and wash before reuse. 3. Chlorinated products may form poisonous gas when contact with acids. 4. Wash hands after use. 5. Breath in fresh air | | If Strong Alkaline: 1. Never mix with strong acid. 2. Avoid contact with water. 3. Ensure ventilation is adequate. 4. Wash hands after every use. If Strong Acid: 1. Avoid inhaling the acid vapor. 2. Acid products may form poisonous gas when contact with chlorinated chemical. 3. Ensure ventilation is adequate. 4. Wash hand after every use. | | 1. Do not use close to fire. 2. No open fire. 3. No smoking. 4. Avoid static or electrical sparking. 5. Wash hands after use. 6. Ensure ventilation is adequate. 7. Always keep container closed. |
| GENERAL STORAGE GUIDELINES | a. Chemicals should be stored by hazard class. b. Incompatible chemicals should be physically segregated from each other during storage c. Chemicals should not be exposed to direct sunlight or localized heat. e. Chemicals should be properly labeled, dated upon receipt, and dated upon opening of the container. f. All containers must be labeled as to contents. Liquids must be labeled by name and percent of each constituent. g. All solids should be separated from liquids. h. Always refer to the MSDS. | | | | | | | | | |
| INCOMPATIBLE WITH: | See specific MSDS | | | Flammable liquids, acids, bases and oxidizers. | | Sulfuric Acid, Flammables and combustibles, Reducing Agents such as sodium thiosulfate, sodium hydrosulfite. | | Flammable liquids and solids, oxidizers. Acids are incompatible with bases and vice versa. | | Acids, bases, oxidizers and poisons. |
| FIRST AID | 1. Ingestion: Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give more water. Seek medical advice. 2. Eye contact: Immediately wash eyes with clean water for at least 15 minutes. Use eyewash station. Eyelids to be held open. Remove clothing if contaminated and wash skin. Seek immediate medical assistance. 3. Skin contact: Immediately wash contaminated skin with plenty of water. Use emergency shower. Remove contaminated clothing and wash before reuse. If redness or irritation occurs seek medical advice. 4. Inhalation: Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing has stopped apply artificial respiration at once. Seek medical advice. | | | | | | | | | |
| PPE | | | | | | | | | | |
| WHAT TO DO IN CASE OF SPILL | 1. Evacuate any non-essential personnel to an area safe from any possible harm and provide emergency first aid if called for. 2. If chemical is flammable or combustible, reduce the risk of fire or explosion by extinguishing any open flames and any other sources of heat or ignition. 3. Assume that this is an abnormal situation. Although PPE may not be necessary in a day-to-day handling or use of the chemical, a spill or leak may go beyond the operational controls that apply. From the MSDS, determine in advance the PPE necessary to deal safely with the situation. 4. Eliminate the further spread of the chemical involved by controlling it at its source if possible. This may be done by closing a valve, sealing a tank or rerouting a process. These actions should be performed by a competent person knowledgeable about the process in order to avoid any further conditions that could lead to additional risks. 5. Attempt to contain the spill of leak by dyking and absorption. If appropriate, the chemical should be either sealed in containers or neutralized. 6. Once the chemical is safely stored or neutralized, the area of the spill or leak must be decontaminated, inspected and monitored. 7. If the area is found to be safe, normal activities can resume. | | | | | | | | | |



A Manual on Chemical Handling and Storage Guidelines

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The health and safety of the workers, and protection of the environment are the paramount concern of our company. Being a laundry facility dealing with different chemicals, it is our commitment to ensure the protection of all workers and guests within the factory premises from these chemicals, as well as the protection of our environment. Giving our workers sufficient education and training on proper chemical handling is very important. This manual contains the guidelines on the proper chemical storage, proper chemical handling, and proper handling of chemical spills.



Storage Guidelines for Specific Chemicals

| | Product Name | Hazard Classification | Do not store with: | | Product Name | Hazard Classification | Do not store with: |
|----|---|-----------------------|--|----|---|-----------------------|--|
| 1 | Acetic Acid (CH ₃ COOH) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. | 13 | Oxalic Acid (C ₂ H ₂ O ₄) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. |
| 2 | Bleaching Liquid 10% (NaOCl) | | Sulfuric Acid, Flammables and combustibles, Reducing Agents such as sodium thiosulfate, sodium hydrosulfite. | 14 | Perchloroethylene (solvent) | | Acids, Bases, Oxidizers and Poisons. |
| 3 | Bleaching Powder (CaOCl) | | Sulfuric Acid, Flammables and combustibles, Reducing Agents such as sodium thiosulfate, sodium hydrosulfite. | 15 | Phosphoric Acid (H ₃ PO ₄) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. |
| 4 | Caustic Soda 100% (NaOH) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. | 16 | Potassium Permanganate (KMnO ₄) | | Sulfuric Acid, Flammables and combustibles, Reducing Agents such as sodium thiosulfate, sodium hydrosulfite. |
| 5 | Citric Acid (C ₆ H ₈ O ₇) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. | 17 | Powder Detergent | | Group irritants together, away from other types of chemicals. |
| 6 | Enzyme | | Group irritants together, away from other types of chemicals. | 18 | Powder Dyestuff | | Flammable liquids, acids, bases and oxidizers. |
| 7 | Fixing Agents | | Group irritants together, away from other types of chemicals. | 19 | Salt (NaCl) | | Group irritants together, away from other types of chemicals. |
| 8 | Hydrochloric Acid (HCl) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. | 20 | Soda Ash (Na ₂ CO ₃) | | Flammable liquids, acids, bases and oxidizers |
| 9 | Hydrogen Peroxide 50% (H ₂ O ₂) | | Sulfuric Acid, Flammables and combustibles, Reducing Agents such as sodium thiosulfate, sodium hydrosulfite. | 21 | Sodium Bicarbonate NaHCO ₃ | | Flammable liquids, acids, bases and oxidizers |
| 10 | Liquid Detergent | | Group irritants together, away from other types of chemicals. | 22 | Softeners | | Flammable liquids, acids, bases and oxidizers |
| 11 | Liquid Dyestuff | | Flammable liquids, acids, bases and oxidizers | 23 | Softeners | | Group irritants together, away from other types of chemicals. |
| 12 | Optical Brighteners | | Flammable liquids, acids, bases and oxidizers | 24 | Sulfuric Acid (H ₂ SO ₄) | | Flammable liquids and solids, and Oxidizers. Acids are incompatible with bases and vice-versa. |