منطقة عجمان الحرة
Ajman Free Zone

HSE REQUIREMENTS FOR STORAGE OF CHEMICAL

HSE requirements for storage of chemical

The storage phase of the chemical is an important stage in the life cycle of these substances, the poor storage of the chemical can lead to sabotage and diversion to waste in a short period, and can also generate hazards for workers in the storage area and the surrounding environment. Here are the recipes and conditions for storage:

In addition to adhering to the general requirements of environmental, the following requirements must be met the:

Location:

- Distance from population density, and sources of drinking water.
- Easy access to and exit to the site.
- The location is suitable for the nature of the materials to be stored.
- Technical services are provided on the site grounds (electricity, fire water, drains isolated from rainwater drains to prevent pollution).

Store design:

- Providing a certificate to comply the safety requirements of the civil defense
- There is sufficient space to move freely between the materials stored either for individuals and transport mechanisms.
- There are tendencies on the floor of the store towards collecting the materials leaking to the designated bank.
- Access to materials should be secure from both sides.
- There should be a distance between the materials and walls not less than 100cm provide
- sufficient ventilation areas
- The presence of several emergency doors in line with the storage space.
- There are breaks between materials that do not fit together using separate buildings.

Walls:

- The internal walls divided into the land of the store must be fire resistant for at least an hour and at least one meter high above the level of the canisters.
- The separation walls must be independent of the structure of the buildings.
- The presence of a fire-proof doorman equipped with a meltable compass, a weight of balance with a slanted rod to close the door or open it automatically and has an emergency exit.
- Insulating electrical connections with a substance that delays its impact by fire.
- Use some supporting columns in the walls.

Emergency exits:

- Emergency exits must be defined by columns to prevent material from being stored in front of them.
- It should be enough for workers to get out and clear fire resistance in the dark. T
- here must be two emergency doors.

Flooring:

- The floor should be resistant to welds and alkali and proportional to the stored materials.
- It should be fairly smooth so that it does not lead to slippage or to the retention of spilled material.
- The presence of a drainage system surrounded by all sides isolated from the public drainage system and rainwater harvesting channels.
- There must be an appropriate barrier around the warehouse buildings that holds rainwater or leaks into the building, especially in stores containing toxic substances to prevent leakage.
- Cement and concrete warehouses need ramps to rise and descend at their outer doors.

Ceiling:

- The roof is intended to prevent rain from entering the store as well as to reserve sunlight.
- It should contain chimneys that allow smoke and heat to come out of it in case of fire.
- Materials that increase the fire in the ceiling (wood, plastic.....) should be excluded.
- The roof-bearing structure must be made of fireproof and non-combustible materials.
- There must be vents.
- The roof can be built of a lightweight and fragile material that does not resist fire, allowing the fumes to come out in case of fires.

Emissions and External Environmental Protection:

- Providing filter units to control and reduce pollutants for the external environment.
- Providing intake and filter units to control and reduce dust pollutants in the indoor environment.

Lighting:

- If the work is during the day, then natural lighting is sufficient.
- If there is electrical equipment for lighting, it must be far from the movement of materials movement inside the store.
- The electrical switches must be of the fire-resistant type.
- The warehouse must be protected from the impact of lightning strikes, especially those containing inflammable materials.

Open storage:

- The floor must be deaf to prevent leaks from reaching groundwater.
- Store the barrels in vertical position
- The barrels stored in a horizontal position that must be fastened with wedges at their sides.
- There are substances separated from storage such as highly flammable liquids, gas cylinders or liquid chlorine.

Storage

- Leave a distance between the stored materials and the external walls, as well as between the stacks of the stored materials allowing freedom of movement and inspection and providing the necessary ventilation.
- The corridors must be barrier-free and marked with clear markings and free from any bumps or protrusions.
- The height of the stored material should not exceed three meters.
- A plan and markings must be drawn up indicating the nature of the potential hazards in each part of the warehouse, including:
    - ✓ The department number in each part of the warehouse.
    - ✓ The location, quantity, quality and quality of hazardous materials involved.
    - ✓ The location of emergency equipment, firefighting and access.
    - ✓ Inventory of hazardous materials continuously.

Separation and insulation of materials:

- Insulation of materials that should not be stored in the same store.
- The basic rule in this regard is not to confuse funds belonging to different types of hazards in accordance with the symbols used in the United Nations classification of hazardous goods.
- Separation of fire-prone materials from other flammable materials.