

Working With Chemical Drums



The 55-gallon drum is a simple and basic piece of industrial equipment. But, like all equipment, drums vary in size, construction and materials, according to their use. And they must be used and stored correctly to provide effective protection against chemical leakage.

Use the Right Drum—Types of Containers

Drums come in two basic styles. An open-head drum, used for storing solid materials, has a lid held in place by a bolt ring that is loosened to remove the lid. A closed-head drum, used for storing liquid materials, has one or more small bungs on the top, rather than a removable lid. Most drums are made of steel, but fiber drums may be used for storing solids, and certain corrosive liquids must be stored in plastic drums. Other materials are available for extremely dangerous chemicals such as PCBs.

Metal drums are stamped on the bottom with markings that indicate their purpose and type. The number 17H designates an open-head, metal drum for solids; 17C designates a heavy-gauge, open-head metal drum for solids; and 17E indicates a closed-head metal drum for liquids.

Use It Right—Handling Containers

Before packing a drum, inspect it for dents, cracks or rust, especially around seams. Check the condition of lid gaskets or bungs to make sure they are in good working order. Use mechanical aids, such as a forklift or drum dolly, to move drums. Attempting to move them by hand can be tricky because the weight of the materials inside may shift and throw you off balance, resulting in smashed fingers or severe back strain. If you must move a drum by yourself, roll it slowly on its bottom rim. If a drum is on its side, get help to lift it up. Before handling a drum, read the label to find out what kind of materials it contains. (Report missing or illegible labels immediately, and don't handle a drum whose contents are unknown.) When handling

containers of hazardous or corrosive materials, you may have to wear protective equipment. Check the condition of the drum before moving it. A bulging lid may indicate that a chemical reaction is going on inside the drum, producing excessive heat or pressure. Such drums must be handled with extreme caution. Also be careful when handling drums that have been exposed to heat or direct sunlight.

Proper Storage

Drums should be stored in designated storage areas, in rows. There should be enough room between the rows for access by equipment. To prevent highly reactive materials, such as acids and bases, from coming into contact with one another, store dangerous chemicals by type. Flammable or combustible materials should be stored away from other materials, especially oxidizers, which feed fires. The drums should be grounded to prevent explosion from sparking.

If a Drum Leaks

A leaking or damaged 55-gallon drum can be overpacked in a larger 85-gallon drum; use a forklift with a drum grabber to perform the operation. Spills should be cleaned up according to company guidelines. Use special spill supplies located in or near the storage area. Be sure you know where they are and how to use them. These supplies are likely to include clay absorbent, vermiculite or spill pads and socks and pillows. Other emergency supplies may include a copy of your company's emergency response plan (read it before you need it!), MSDSs describing emergency response guidelines for the chemicals being stored and fire-fighting equipment. Your company may also provide emergency showers and eyewash stations in areas where acids or bases are stored.

When you work with chemical drums, you work with potential trouble. Handling and storing drums correctly and being prepared for emergencies are the keys to preventing serious accidents on the job. □

