

# Storing lubricants

Proper storage and handling helps lubricants last longer.

**RESEARCHING, SPECIFYING, DEVELOPING, TESTING** and blending lubricants are just the first steps in the process of applying the right lubricants in the right applications. An equally important step to ensure customers use the best quality lubricants is making sure they are stored properly, both after blending and before use. The care with which lubricants are formulated and blended can be completely nullified by unsatisfactory storage or careless handling.

Ideally, packaged lubricants (in cans, plastic bottles, small drums, pails or cartridges) should be stored indoors on suitable shelves. The lubricant stored

with aisles wide enough to allow a pallet truck to be maneuvered.

Only in very cold climates can indoor temperatures drop low enough to produce adverse effects in a lubricant. At the other end of the temperature scale, excessive heat, due to the proximity of steam pipes, boilers, furnaces or flues, should be avoided for grades containing volatile solvents. In many cases, because of insurance requirements or local fire regulations, it may be necessary to house such products in a store separate from lubricants. If one part of the store is hot, it should be reserved for oils of high viscosity.

In many cases, 205-liter drums have

to prevent movement.

All too often, where drums are stacked, the top ones are used and quickly replaced by new ones, so the lower ones remain undisturbed for years. For this reason alone, racking is preferred. Sloping racks in which barrels are loaded at one side and removed from the other (first in, first out) are ideal. Apart from ensuring regular replacement, a rack is convenient to load, is safe and makes for reasonable use of space. A corrugated iron or plastic roof over the rack also provides a degree of protection against rain. Because of the rolling of drums, however, the ideal positions of the bungs cannot be maintained for long.



All stages of packaging, shipping and storing lubricants must be conducted at the highest levels to ensure product purity and machine safety.

should be clean, dry and secure so that the containers cannot be tampered with. Since most companies cannot store everything indoors, however, they need to make the best use of the space available, with easy access to the packages and freedom to use them in the order delivered.

If a forklift truck or similar is available, palletization eases stacking, reduces handling risks and allows better access to the lower layers. Small drums can be stacked on pallets in tiers seven high, though this is unusual except in a central store serving a number of secondary sites or where space limitations justify frequent breaking of the stacks. Large drums also can be palletized.

Steel racks have several merits: (1.) allow space to be used to the best advantage, (2.) ease stock handling and (3.) encourage regular turnover. They should be installed

to be stored outdoors to make delivery, handling and dispensing easier. Drums should not be stored upright outdoors unless they are upside down, with the bungs at the bottom. Gaskets and o-ring seals around bungs are rarely air-tight. Any rainwater that collects on the tops of drums stored upright is usually sucked into the drum as it breathes (expansion and contraction of the drum's contents) due to daily changes in air temperatures.

Gaskets and o-ring seals around bungs in drums should ideally be wetted by the drum's contents. Drums stored horizontally should be placed so that their bungs are below the level of the oil, ideally at the three o'clock and nine o'clock positions. Drums stored on their sides should be clear of the ground, perhaps on baulks of timber. They can be stacked three-high in this way but must be carefully wedged

Bulk storage is used for the delivery of oil by pipeline, railcar tank wagon or road tanker and to the storage of oil in tanks. To avoid cross-contamination in a factory, all tanks should be clearly and indelibly labeled near the draw-off cock. A similar label should be attached to the fill-pipes. Oil-storage tanks should preferably be indoors, but they can be in the open if adequate protection is provided against driving rain and snow and excessive heat and cold.

Special lubricants require special storage and handling, but that will be the subject for another column.



*David Whitby is chief executive of Pathmaster Marketing Ltd. in Surrey, England. You can contact him at **pathmaster.marketing@yahoo.co.uk**.*