DEPARTMENT OF
ENVIRONMENTAL HEALTH AND SAFETY

EHS Fact Sheet

Flammable Liquid Storage in Refrigerator/Freezer

Flammable material refrigerators and freezers are designed to prevent ignition of flammable vapors inside the storage compartment and should be purchased whenever a refrigerator is needed to store flammable liquid. A flammable liquid is defined by the fire code as having a flash point of less than 100 ˚F (38˚C). Some examples of common flammable liquids are listed at the end of this Fact Sheet. All the electrical components in this type of refrigerator are outside the refrigerator, and the compressor is sealed or located at the top of the unit.

Flammable material refrigerators also may incorporate design features such as thresholds, self-closing doors, magnetic door gaskets, and special inner shell materials that control or limit the damage should a reaction occur within the storage compartment. A label stating "**Flammable Materials Refrigerator: Keep fire away**" can identify such refrigerators. The refrigerators must be U.L. certified as Flammable Material Storage Refrigerators also known as Explosion Proof. Ultra low freezers (less than -40˚F) generally cannot be approved for storage of flammable materials.

Regardless of type, every laboratory refrigerator and freezer must be clearly labeled to indicate whether it is appropriate for the storage of flammable materials. If your laboratory refrigerator is unlabeled, it is probably a domestic refrigerator that needs the label: "**Not For Flammable Storage**". Laboratory refrigerators should also be labeled "**No Food**" Food should never be stored or consumed near chemicals.

Flammable liquids may never be stored with strong oxidizers or acids, and compressed gases should not be stored in enclosed spaces like refrigerators.

Thermostat inside, left side, caused spark

Common Laboratory Solvents
Flammable liquids have a flash point. Do not store these flammable liquids in domestic refrigerators.

Chemical	Flash Point ˚F	Flash Point ˚C
Acetone	1.4	-17
Acetonitile	55	13
Benzene	12	-11
Butanol	85	35
Dioxane	54	12
Ethyl Acetate	55	17
Ethyl Ether	-49	-45
Hexane	-7	-22
Isopropoanol	53	12
Methonol	54	12
Petroleum Ether	0.4	-18
Propyl Alcohol	65	-18
Pryidine	63	17
Tetrahydrofluran	6	-14
Toluene	40	4
Xylenes	77	25

Environmental Health & Safety
University Health Services, Suite 002
Phone: (405) 744-7241 | Email: ehs@okstate.edu

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