Table 13.1: General Requirements for Flammable and Combustible Liquid Storage

ITEM	REQUIREMENTS
5. ELECTRICAL INSTALLATIONS IN CLASSIFIED AREAS	i. Electrical Area Classification shall not be required for indoor liquid storage where all containers, intermediate bulk containers and portable tanks are sealed and are not opened. ii. Electrical area classification shall not be required for dispensing of quantities that do not exceed 0.5 L including but not limited to tinting of paints and coatings. iii. For liquid storage rooms that are totally enclosed within the building, electrical wiring and utilization equipment for Class I Liquid and Class II, Class III liquids heated at or above their flash points, shall be Class I, Division 2 (Zone 2). iv. For liquid storage rooms that are totally enclosed within the building, electrical wiring and utilization equipment for Class II and Class III Liquid storage shall be suitable for ordinary purpose. v. Class I, Division 1 electrical equipment and wiring must be used in the immediate vicinity of any points where ignitable vapor releases are expected, such as areas involving transfer operations.
6. PIPING	i. The design, fabrication, assembly, test and inspection of piping systems shall be suitable for working pressures and structural stresses to be encountered by the piping systems. ii. Liquid piping material, valves, faucets, couplings, flexible connectors, fittings and other pressure containing parts shall comply with ASME B31, Code for pressure Piping. iii. Piping system shall be maintained liquidtight. iv. Low melting point materials such as aluminum, copper, brass, plastics or non-ductile materials such as cast iron shall be permitted to be used underground within pressure and temperature limitations of ASME B31. v. Piping material shall be compatible with the liquids being handled. vi. Joints shall be designed and installed in liquidtight manner by welded, flanged, threaded or mechanical attachment methods. vii. Class I liquid joint systems are recommended to be welded at all locations. viii. Flexible connectors shall be listed and approved in accordance with international test standards. ix. Pipe joints dependent upon the friction characteristics of combustible materials for mechanical continuity or liquidtightness of piping shall only be used outside of buildings and aboveground. x. Piping systems shall be supported and protected against physical damage and stresses arising from settlement, vibration, expansion or contraction. xi. Load bearing piping supports located in high fire exposure risk shall be protected by fire resistive construction, fire resistant protective coatings or water spray systems etc. in accordance with API 2218, Fireproofing Practices in Petroleum and Petrochemical Processing Plants. xii. Aboveground piping shall be protected with corrosion coatings. xiii. Underground piping shall be protected for corrosion with coatings and Cathodic protection. xiv. Installation and Testing of Piping shall comply with NFPA 30, NFPA 30A and ASME B31.
7. VENTILATION	i. Ventilation for the rooms storing flammable and combustible materials shall be in accordance with **Chapter 10, Section 2.20.**