Table 9.11: Foam Sprinkler/ Deluge/ Pourer System Requirements

ITEMS	REQUIREMENTS
14. MEDIUM AND HIGH – EXPANSION FOAM SYSTEM	i. Medium- and high-expansion foams shall be specifically evaluated to verify the applicability of medium- or high-expansion foam as a fire control agent for the type of hazard being considered for the application of foam. ii. Medium and high-expansion Foam Systems shall be provided where required by other sections of the code to protect hazards such as Ordinary combustibles, Flammable Liquids etc. iii. Liquefied Natural Gas (LPG) shall be protected only with High Expansion Foam Systems. iv. Medium and high-expansion Foam Systems shall not be used on fires containing Cellulose Nitrate, energized unenclosed electrical equipment and Water reactive metals such as Sodium, Potassium, Sodium-Potassium Alloys (NaK), Triethyl-aluminium, Phosphorus pentoxide, Liquefied Flammable Gas. v. Protection with Foam and Personnel Safety shall be as per material MSDS and foam manufacturers specifications. vi. Medium and high-expansion Foam Systems can be used in total flooding systems, Local application systems or portable foam generating Systems. vii. Medium and high-expansion Foam Systems shall maintain an electrical clearance from live insulated electrical equipment as per **Table 9.11.I.** viii. Automatic Detection in accordance with **Chapter 8. Fire Detection and Alarm Systems** shall be used for fixed High expansion Foam Systems. ix. Where hazard evaluation demands, detectors shall be Civil Defence listed and approved. The same applies to flame, combustibles, vapor, gas detectors, inter-faced to control systems as per **Chapter 8. Fire Detection and Alarm Systems.** x. The foam-generating apparatus shall be located and arranged so that inspection, testing, recharging, and other maintenance operations are facilitated and the interruption of protection is held to a minimum. xi. The foam-generating equipment shall be located as close as possible to the hazard(s) it protects, but not where it will be unduly exposed to a fire or explosion. xii. The system Design, Application and installation shall be as per manufacturer's specifications.

Table 9.11.I.: Clearance from High Expansion Foam Equipment to Live Uninsulated Electrical Component

NOMINAL LINE VOLTAGE kV	NOMINAL VOLTAGE TO GROUND kV	DESIGN BASIC IMPULSE LEVEL (BIL) kV	MNIMUM CLEARANCE OF HIGH EXPANSION FOAM EQUIPMENT
1. Up to 15	Up to 9	110	178 mm
2. 23	13	150	254 mm
3. 34.5	20	200	330 mm
4. 46	27	250	432 mm
5. 69	40	350	635 mm
6. 115	66	550	940 mm
7.138	80	650	1118 mm
8. 161	93	750	1321 mm
9. 196– 230	114-132	900/ 1050/ 1175/ 1300	1600 mm/ 1930 mm/ 2210 mm/ 2489 mm
10. 287-380	166-220	1425/ 1550	2769 mm/ 3048 mm
11. 500	290	1675/ 1800/ 1925	1675 mm/ 3327 mm/ 3607 mm/ 3886 mm
12. 500-700	290-400	2100/ 2300	4267 mm/ 4674 mm