

2) Jain Fire Retardant (FR) PE pipe

Jain FR Pipe is a fire resistant HDPE pipe system for application in underground mines and firefighting system where fire safety is a concern. State of art testing facility is available in house (flame chamber from Altas, USA) for conducting the fire retardant test.

Manufactured from basic HDPE raw material blended with fire retardant chemical compound. The function of FR chemical is to improve Limiting Oxygen Index (LOI). The limiting oxygen index is a measure of the percentage of oxygen that has to be present to support combustion of the plastic - the higher the LOI the lower the flammability. Air contains approximately 21% oxygen and therefore any material with an LOI of less than 21 will support burning in an open-air situation.

Limiting Oxygen Index (LOI)	
Material	LOI
POM	15
PMMA	17
PP	17
PE	17
PS	18
PC	26
PVC	45
PTFE	>95

Jain FR Pipe significantly reduces the spread of flame in a fire. As a result of excellent localized surface charring properties, carbonaceous char forms on the product after being exposed to flames which effectively protects the pipe and its contents from ignition.

Jain HDPE – FR pipe, when comes in contact with the flame source, has the ability to withstand the harsh fire environment and its Limiting oxygen index value is more than 21% and hence the flame extinguishes, when the source of the flame is removed. This is executed by its virtue of meeting the requirement of UL 94 flammability testing standard and as per UL 94, the material has V 0 / V 2 classification based on final wall thickness of pipe.

