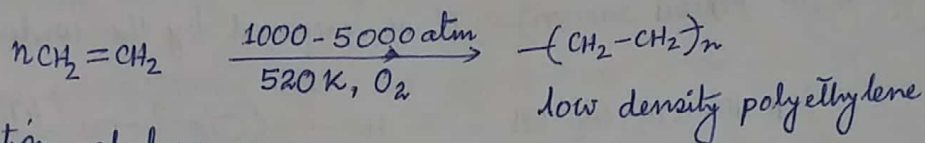
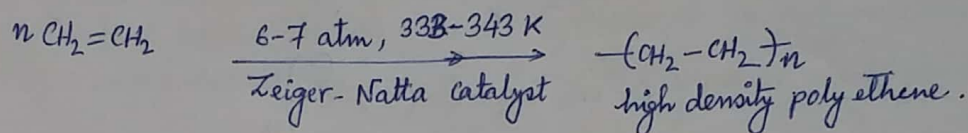


## Polyethylene (Polythene)

(1) Polymerization at high pressure:



(2) Polymerization at low pressure:

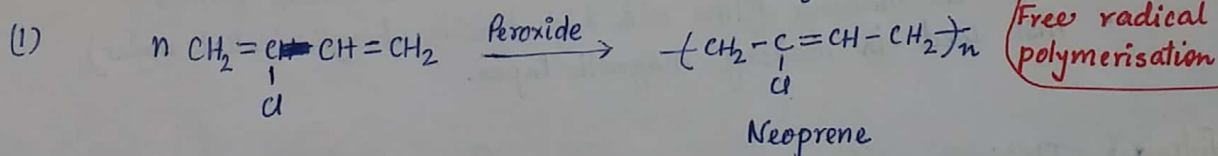


Properties and uses:

Low density polyethylene is chemically inert, tough, extremely poor conductor of electricity. It is pliable over a wide range of temperature. It is used in making packing films, modulated toys, insulation wire, pipe and squeeze bottles.

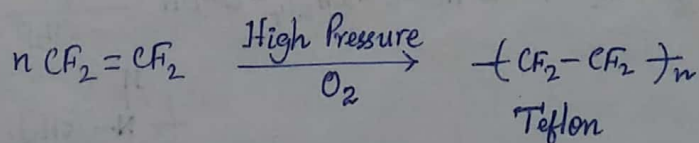
High density polyethylene is also chemically inert, highly crystalline, stiffer, harder and possess a greater tensile strength. Its softening temp (408 K) is higher than LDP (388 K). HDP is used in the preparation of household wares, toys, pipes, bottles and containers.

Synthetic rubber: neoprene and Buna-S (co-polymer of 1,3-butadiene and styrene).



Neoprene resemble natural rubber in its properties. Superior to natural rubber in its stability to aerial oxidation and its resistance to oils, gasoline and other solvents. It is used to make hoses, gloves, shoe soles, insulating materials etc.

Polytetrafluoroethylene (Teflon):



It is highly crystalline linear polymer with high melting point (600K), and softening point (decomposes at the softening point - not a true thermoplastic). Teflon is resistance to heat, all chemicals, solvents. Good insulator and has very low friction coefficient