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(54) Title: COMMON SOLVENT PROCESS FOR PRODUCING HIGH MOLECULAR WEIGHT HALOBUTYL RUBBER

(57) Abstract: An integrated process for the solution polymerization and subsequent halogenation of butyl rubber in a common medium is disclosed. The process comprises providing a solution polymerization reactor containing a C6 medium mixed with a monomer mixture comprising at least an isoelefin monomer and a multiolefin monomer in a mass ratio of monomer mixture to medium of from 61:39 to 80:20. Once polymerized, residual unreacted monomer mixture is separated from the rubber solution using a distillation process. The residual monomers may then be purified and recycled back into the reactor. The separated rubber solution is then halogenated. The process obviates the need for separating the rubber from the medium following polymerization, then re-dissolving it in another solvent for halogenation, thereby saving energy cost. The process optionally employs heat exchangers for the reactor feed streams to further reduce energy consumption.

