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(54) Title: IN-SITU BROMINE REGENERATION PROCESSES FOR THE PRODUCTION OF BROMOBUTYL ELASTOMERS

(57) Abstract: In some embodiments a process includes introducing an aqueous solution to a first hydrocarbon solvent to form an emulsion, wherein the aqueous solution comprises an oxidizing agent containing solution and a surfactant containing solution. The process further includes introducing a cement to the emulsion to form a first mixture within a reactor, wherein the cement comprises a butyl rubber elastomer and a second hydrocarbon solvent that is the same as or different than the first hydrocarbon solvent. The process further includes introducing a halogen source to the first mixture contained within the reactor to form a second mixture comprising a halobutyl rubber elastomer. The process further includes introducing a neutralizing agent with the second mixture to form a third mixture. The process further includes isolating the halobutyl rubber elastomer from the third mixture.



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