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REASONS OF CRYSTALLINITY OF LOW MOLECULAR POLYVINYLCHLORIDE

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Summary

Rising of crystalline low molecular polyvinylchloride (PVC) at radical vinylchloride polymerization in butyraldehyde and tetrahydrofuran at atmospheric and high pressure (50° C) has been studied. Crystallinity is increased for polymers of lower molecular weight. Reprecipitation of low molecular PVC results in fractionation enriching separated PVC with crystalline fraction due to higher solubility of amorphous fraction. On data of infrared spectroscopy crystallinity is due to preponderance of syndiotactic units. Decrease of PVC crystallinity with pressure is related to increase of PVC molecular weight and also probably to bigger volume of transition complex for syndio-addition