~~Patent c~~Claims

1. A process for isolating and obtaining polychloroprene solids, characterized in that an aqueous polychloroprene dispersion is brought into contact with water vapor comprising coagulating agent, ~~and~~ the polychloroprene solid consequently coagulates, and is separated from the coagulation suspension.

~~2. The process as claimed in claim 1, characterized in that the polychloroprene solid is separated from the coagulation suspension.~~

~~3.~~2. The process as claimed in claim ~~2~~1, characterized in that the polychloroprene solid is dewatered by means of a dewatering apparatus.

~~4.~~3. The process as claimed in claim ~~3~~2, characterized in that the dewatered polychloroprene solid is dried by means of a drying apparatus.

~~5.~~4. The process as claimed in claim ~~4~~3, characterized in that additives and/or inert materials are added to the dewatered polychloroprene solid in the drying apparatus.

~~6.~~5. The process as claimed in claim ~~5~~4, characterized in that the dried, dewatered polychloroprene solid is pelletized and cooled by means of the underwater pelletization process.

~~7.~~6. The process as claimed in claim ~~6~~5, characterized in that the polychloroprene dispersion is a latex.

~~8.~~7. The process as claimed in claim ~~7~~6, characterized in that the polychloroprene dispersion is produced by means of emulsion polymerization.

~~9.~~8. The process as claimed in claim ~~8~~7, characterized in that the water vapor comprising coagulating agent is formed by means of water vapor and of an aqueous coagulating-agent solution.

~~10.~~9. The process as claimed in claim ~~9~~8, characterized in that coagulating-agent solution used comprises an aqueous solution made of inorganic salts (coagulating agent), preferably of metals of the second and third main group of the Period Table of the Elements.

11.10. The process as claimed in claim 09, characterized in that coagulating agent used comprises calcium chloride, magnesium chloride, magnesium sulfate, aluminum chloride, and/or aluminum sulfate.

12.11. The process as claimed in claim 10, characterized in that the coagulating-agent solution has a coagulating-agent concentration of from 1% by weight to 60% by weight, preferably from 2% by weight to 45% by weight, particularly preferably from 10% by weight to 35% by weight, based on the coagulating-agent solution.

13.12. The process as claimed in claim 11, characterized in that prior to contact with the water vapor comprising coagulating agent, the polychloroprene dispersion is diluted.

14.13. The process as claimed in claim 12, characterized in that the polychloroprene dispersion is diluted to a solids content of from 38% by weight to 45% by weight, preferably from 28% by weight to 35% by weight, and particularly preferably from 20% by weight to 28% by weight, based on the polychloroprene dispersion.

15.14. The process as claimed in claim 8, characterized in that from 80 kg to 1000 kg of water vapor / t of solid of the polychloroprene dispersion are used, preferably from 80 kg to 250 kg of water vapor / t of solid of the polychloroprene dispersion.

16.15. The process as claimed in claim 10, characterized in that from 10 to 40 kg of coagulating agent / t of solid of the polychloroprene dispersion are used, preferably from 10 to 25 kg of coagulating agent / t of solid of the polychloroprene dispersion.

17.16. The process as claimed in claim 15, characterized in that the aqueous polychloroprene dispersion flows through a flow/coagulation apparatus, where the flow/coagulation apparatus has apertures through which the water vapor comprising coagulating agent can pass and encounters the polychloroprene dispersion in the flow/coagulation apparatus.

18.17. The process as claimed in claim 2, characterized in that the polychloroprene solid is dewatered in the dewatering apparatus as far as a residual moisture level of from 10% by weight to 15% by weight, preferably from 1.0% by weight to 9% by weight, based on the polychloroprene solid.

19.18. The process as claimed in claim 3, characterized in that the dewatered polychloroprene solid has in the drying apparatus as far as a residual moisture level of from 1% by weight to 1.5% by weight, preferably from 0.5% by weight to 1% by

weight, particularly preferably from 0.1% by weight to 0.5% by weight, based on the dewatered polychloroprene solid.

20.19. The process as claimed in claim 1918, characterized in that the dried polychloroprene solid takes the form of rubber melt at the end of the drying phase in the drying apparatus.

21.20. The process as claimed in claim 2019, characterized in that release agents are added to the water in the underwater pelletization process.