When a Ne:CCl$_4$ sample is codeposited at approximately 5 K with a beam of neon atoms that have been excited in a microwave discharge, the infrared spectrum of the resulting solid deposit shows prominent absorptions that have previously been assigned to Cl$_2$CCl–Cl, as well as other absorptions of uncharged, cationic CCl$_n$ (n = 1-3) and anionic CCl$_n$ (n = 3,4) species. Studies of Ne:$^3$CCl$_4$ samples and studies of the photodestruction of the products when the deposit is subjected to various bands of visible and ultraviolet radiation support the proposed assignments.

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