

hol are heated to about 80°C, and the aluminum chlorohydrate is stirred in. After the aluminum chlorohydrate is dispersed, the cyclomethicone is added, and the mixture is stirred until it is uniform. The formulation should be allowed to cool, with mixing, until just above the solidification temperature (50–60°C) and then poured into molds.

IV. NONTRADITIONAL TOPICAL FORMULATIONS BASED ON SILICONES

The topical formulations containing silicones discussed in the previous sections are, for the most part, variations of commercial formulations that have changed little over the last 10 to 20 years. This is especially true for the emulsion formulations discussed in Section III.C. Recently, the development of new silicone surfactants (dimethicone copolyols) has provided the formulator with emulsifiers that allow novel silicone-based formulations to be made. One such emulsifier is a dimethicone copolyol that can be used to make a variety of water-in-oil emulsions based on cyclomethicone (7). These formulations are quite different from water-in-oil emulsions, such as the one given in Table 3, that must be thickened to provide a stable formulation. Formulations of the type listed in Tables 13 and 14, on the other hand, are stable over a wide viscosity range, giving the formulator more flexibility in producing a formulation with the desired viscosity. These formulations can accommodate ingredients that are soluble in either water or cyclomethicone. Because the external phase of the emulsion is cyclomethicone, all have the pleasant dry feel associated with the silicone.

The formulation given in Table 13 is an example of a skin lotion that delivers mineral oil and glycerin as the active ingredients. Other emollients such as petrolatum can be added to the oil phase, or substituted for the mineral oil. A small amount of electrolyte is

Table 19.12 Antiperspirant Stick

Ingredient	Wt%	Tradename / supplier
Stearic acid	15.0	
Cetyl alcohol	15.0	
Aluminum chlorohydrate (powder)	20.0	
Cyclomethicone	50.0	345 Fluid / Dow Corning