We present far-infrared spectra, \( \lambda = 52-93 \) micron, obtained with the Spitzer Space Telescope in the Spectral Energy Distribution mode of its MIPS instrument, of a selection of luminous compact far-infrared sources in the Small Magellanic Cloud. These comprise nine Young Stellar Objects (YSOs), the compact HII region N81 and a similar object within N84, and two red supergiants (RSGs). We use the spectra to constrain the presence and temperature of cool dust and the excitation conditions within the neutral and ionized gas, in the circumstellar environments and interfaces with the surrounding interstellar medium. We compare these results with those obtained in the LMC. The spectra of the sources in N81 (of which we also show the ISO-LWS spectrum between 50-170 micron) and N84 both display strong [OI] \( \lambda 63 \) micron and [OIII] \( \lambda 88 \) micron fine-structure line emission. We attribute these lines to strong shocks and photo-ionized gas, respectively, in a `champagne flow` scenario. The nitrogen content of these two HII regions is very low, definitely \( N(N)/N(O) < 0.04 \) but possibly as low as \( N(N)/N(O) < 0.01 \). Overall, the oxygen lines and dust continuum are weaker in star-forming objects in the SMC than in the LMC. We attribute this to the lower metallicity of the SMC compared to that of the LMC. Whilst the dust mass differs in proportion to metallicity, the oxygen mass differs less; both observations can be reconciled with higher densities inside star-forming cloud cores in the SMC than in the LMC. The dust in the YSOs in the SMC is warmer (37-51 K) than in comparable objects in the LMC (32-44 K). We attribute this to the reduced shielding and reduced cooling at the low metallicity of the SMC. On the other hand, the efficiency of the photo-electric effect to heat the gas is found to be indistinguishable to that measured in the same manner in the LMC, 0.1-0.3%. This may result from higher cloud-core densities, or smaller grains, in the SMC. The dust associated with the two RSGs in our SMC sample is cool, and we argue that it is swept-up interstellar dust, or formed (or grew) within the bow-shock, rather than dust produced in these metal-poor RSGs themselves. Strong emission from crystalline water ice is detected in at least one YSO. The spectra constitute a valuable resource for the planning and interpretation of observations with the Herschel Space Observatory and the Stratospheric Observatory For Infrared Astronomy (SOFIA).