

Powder samples of the ternary carbide  $\text{ErMn}_4\text{Fe}_8\text{C}_{x-1}$  were oriented under a low magnetic field  $H \sim 0.5$  T. Analysis of the crystal texture of the samples confirms that the compound is of easy plane type, in agreement with magnetisation measurements and neutron diffraction experiments performed elsewhere. Both the latter techniques have revealed that the magnetic arrangement is rather complicated, as supported by competing contributions to magneto-crystalline anisotropy. However, assuming a reasonably simple expression for the magneto-crystalline anisotropy valid at high temperature only, the texture analysis performed at 300 K, has allowed simulation of the anisotropic magnetisation curve for this planar ferrimagnetic structure. A comparison with the experimental magnetisation curve reveals the onset of a first order magnetisation process (FOMP) taking place under an applied field up to 1.8 T. The occurrence of this FOMP should result on the competition between different contributions to the magneto-crystalline anisotropy energy. To our knowledge, it is the first time that an experimental determination of the texture is taken into account for the magnetisation curve calculation of an easy plane ferrimagnetic structure.