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Pressure dependance of the Curie temperature of TbNi₂Mn, investigated using designer diamond anvils¹ DAMON JACKSON, SCOTT MCCALL, SAMUEL WEIR, Lawrence Livermore National Laboratory, DAVE YOUNG, Louisiana State University, QIU WEI, YOGESH VOHRA, University of Alabama, Birmingham —

TbNi₂Mn is a cubic Laves structured material with a Curie temperature at ambient pressure of $T_C = 151$ K. The behavior of the Curie temperature has been investigated by AC magnetic susceptibility under both hydrostatic and non-hydrostatic conditions using designer diamonds up to 29 GPa, for which it was found to decrease at $dT_C/dP = -2.0$ K GPa⁻¹. However, non-hydrostatic conditions result in a flattening out of T_C with pressure which is non-reservable.

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