

substance: $\text{Mn}_n\text{Si}_{2n-m}$

property: magnetic properties of $\text{Mn}_{27}\text{Si}_{47}$

(second-phase effects?)

Itinerant antiferromagnet with a spiral spin structure of incommensurate periodicity $I = 163 \text{ \AA}$ along the c axis (from small-angle neutron scattering). Angular change between two consecutive Mn planes (which are separated by 1.09 \AA) is 2.4 \AA . Easy plane $[001]$ [80N].

Néel temperature

T_N	42 K	temperature of discontinuous change of χ^{-1}	80N
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paramagnetic Curie temperature

Θ_p	+ 38 K	from Curie-Weiss law, $T = 50 \dots 110 \text{ K}$	80N
	+ 5 K	from Curie-Weiss law, $T = 130 \dots 200 \text{ K}$	

magnetic moment per ion

p_A	$0.056 \mu_B/\text{Mn}$	$T = 4 \text{ K}$	from neutron diffraction intensities	80N
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saturation magnetic moment per ion

$p_{A,s}$	$0.0135 \mu_B/\text{Mn}$	$T = 4 \text{ K}$	magnetization at $B = 1 \text{ T}$	80N
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paramagnetic moment

p_{eff}	$0.09 \mu_B/\text{Mn}$	$T > T_N$	from Curie-Weiss law	80N
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References:

80N Nakajima, T., Schelten, J.: J. Mag. Magn. Mater. 21 (1980) 157.