

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

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

(except magnetic properties)

**conductivities**

$\sigma$	220 $\Omega^{-1} \text{ cm}^{-1}$	$\parallel c, \text{ RT}$	67V
	218 $\Omega^{-1} \text{ cm}^{-1}$		73L
	420 $\Omega^{-1} \text{ cm}^{-1}$		74Z
	760 $\Omega^{-1} \text{ cm}^{-1}$	$\perp c, \text{ RT}$	67V
	1060 $\Omega^{-1} \text{ cm}^{-1}$		73L
	900 $\Omega^{-1} \text{ cm}^{-1}$		74Z

**thermoelectric power**

$S$	160 $\mu\text{V K}^{-1}$	$\parallel c, \text{ RT}$	67V
	170 $\mu\text{V K}^{-1}$		73L
	100 $\mu\text{V K}^{-1}$	$\perp c, \text{ RT}$	67V
	105 $\mu\text{V K}^{-1}$		73L

**thermal conductivities**

$\kappa$	0.029 $\text{W cm}^{-1} \text{ K}^{-1}$	$\parallel c, \text{ RT}$	67V
	0.030 $\text{W cm}^{-1} \text{ K}^{-1}$		73L
	0.046 $\text{W cm}^{-1} \text{ K}^{-1}$	$\perp c, \text{ RT}$	67V
	0.053 $\text{W cm}^{-1} \text{ K}^{-1}$		73L

From 77 to 300 K  $\rho(T)$  of  $\text{Mn}_{27}\text{Si}_{47}$  is fairly well represented by a straight line:  $\rho_{\perp} = aT$  and  $\rho_{\parallel} = aT + b$  with  $a \approx 8.3 \cdot 10^{-6} \Omega \text{ cm K}^{-1}$  and  $b \approx -2.4 \cdot 10^{-4} \Omega \text{ cm}$  [74Z].

**References:**

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- 74Z Zwilling, G., Nowotny, H.: Monatsh. Chem. 105 (1974) 666.