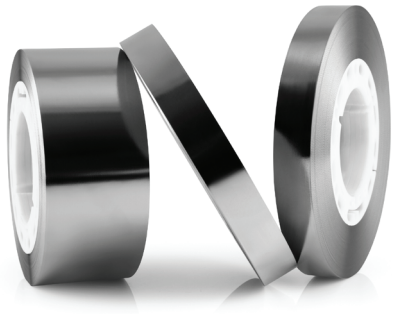
VITROPERM® 270



NOMINAL ALLOY COMPOSITION

Alloy	Fe	Ni	Cu	Nb	Si	B	
VP 270	Balance (79.7)	5.8	1.0	5.4	6.4	1.7	(wt-%)
	71.8	5.0	0.8	2.9	11.5	8.0	(at.-%)

MAGNETIC PROPERTIES[1]

Property	VP 270
Saturation polarization (as cast / amorphous @ 20 °C)	1.24 T
Polarization (nanocrystalline @ 20°C, 500 A/m)	1.32 T
Saturation magnetostriction (as cast / amorphous)	25 ppm
Saturation magnetostriction (nanocrystalline)	6 - 7 ppm
Permeability (transverse field annealing ½ h @ 540 °C)	5,100
Permeability (transverse field annealing ½ h @ 560 °C)	4,700
DC coercivity (F annealed / flat hysteresis loop)	> 3 A/m
Curie temperature	~ 600 °C

PHYSICAL PROPERTIES[1]

Property	VP 270
Mass density (as cast / amorphous)	7.30 g/cm^3
Mass density (nanocrystalline)	7.50 g/cm^3
Electrical resistivity	1.15 µΩm
Coefficient of thermal expansion (20 - 100 °C)	$8 \cdot 10^{-6}$/K
Crystallization temperature	~ 480 °C

AVAILABLE DIMENSIONS

Property	Value	Unit
Thickness (computed average thickness from weight)	18 ± 3	µm
Widths slit to width (others on request)	3.0 … 46.0 ± 0.15	mm
Widths width as cast (others on request)	30.0 … 50.0 ± 0.5	mm

[1] Typical values, not part of a specification

VACUUMSCHMELZE GMBH & CO. KG
Grüner Weg 37
D 63450 Hanau / Germany
Phone +49 6181 38 0
Fax +49 6181 38 2645
info@vacuumschmelze.com
www.vacuumschmelze.com

VACUUMSCHMELZE CHINA MAGNETICS
Shanghai Sales Office
Room 06, 19F
Zhongrong Hengrui International Plaza
620 Zhangyang Road, Pudong District
Shanghai, PRC 200122
Phone +86 21 58 31 98 37
Fax +86 21 58 31 99 37
vac_china@vacuumschmelze.com

VAC MAGNETICS LLC
2935 Dolphin Drive
Suite 103
Elizabethtown, KY 42701
Phone +1 270 769 1333
Fax +1 270 769 3118
info-usa@vacmagnetics.com

Published by VACUUMSCHMELZE GmbH & Co. KG, Hanau, Oktober 2021

VACUUMSCHMELZE®

ADVANCED MAGNETIC SOLUTIONS