Yarn Count Conversion: Tex, Denier, Ne and Nm

Converts yarn linear density between tex, decitex, denier (direct systems) and English cotton count Ne and metric count Nm (indirect systems), from any one of them.

Method: Definitions and mass and energy balances: tex = g/1000 m; denier = g/9000 m; Ne = number of 840-yd hanks per lb; Nm = km/kg

Input parameters

Unit system: SI

Parameter	Value	Unit
Count entered in	denier	
Count value	20.000	

Calculated results

Parameter	Value	Unit
Tex (g per 1000 m)	2.2222	
Decitex	22.222	
Denier (g per 9000 m)	20.000	
English cotton count (840-yd hanks per lb)	265.74	
Metric count (km per kg)	450.00	

Formula and method

$$\mathrm{den} = 9\,\mathrm{tex}, \quad Nm = \frac{1000}{\mathrm{tex}}, \quad Ne = \frac{590.5}{\mathrm{tex}}$$

Variables

system	Count entered in	-
N	Count value	-
tex	Tex (g per 1000 m)	-
dtex	Decitex	-
den	Denier (g per 9000 m)	-
Ne	English cotton count (840-yd hanks per lb)	-
Nm	Metric count (km per kg)	-

Method and standards

Count definitions.

Assumptions and limits

- Single yarns; folded yarns need the resultant count.

References

- Definitions and mass and energy balances: tex = g/1000 m; denier = g/9000 m; Ne = number of 840-yd hanks per lb; Nm = km/kg

Report details

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Release checks	3 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/chemical/textile-rice-oil/yarn-count-conversion

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.