

## APPENDIX A-1—CONVERSION FACTORS

Force Conversions		
<i>To convert from to</i>	<i>to</i>	<i>Multiply by</i>
grams . . . . .	ounces (avdp) . . . . .	0.03527
kilograms . . . . .	newtons . . . . .	9.9807
kilograms . . . . .	ounces (avdp) . . . . .	35.27
kilograms . . . . .	pounds (avdp) . . . . .	2.205
newtons. . . . .	kilograms . . . . .	0.1020
ounces (avdp) . . . . .	grams . . . . .	28.35
pounds (avdp) . . . . .	kilograms . . . . .	0.4536

Force/Area Conversions		
<i>To convert from to</i>	<i>to</i>	<i>Multiply by</i>
kilograms/cm <sup>2</sup> . . . . .	psi . . . . .	14.223
kilograms/mm <sup>2</sup> . . . . .	psi . . . . .	1422.3
megapascals (MPa) . . . . .	psi . . . . .	145.04
newtons/meter <sup>2</sup> . . . . .	pascals. . . . .	1.000
newtons/meter <sup>2</sup> . . . . .	psi . . . . .	0.000145
pascals . . . . .	newtons/meter <sup>2</sup> . . . . .	1.000
pascals . . . . .	psi . . . . .	0.000145
pounds/in <sup>2</sup> (psi) . . . . .	kilograms/cm <sup>2</sup> . . . . .	0.07031
pounds/in <sup>2</sup> (psi) . . . . .	kilograms/mm <sup>2</sup> . . . . .	0.0007031
pounds/in <sup>2</sup> (psi) . . . . .	newtons/meter <sup>2</sup> . . . . .	6894.8
pounds/in <sup>2</sup> (psi) . . . . .	pascals . . . . .	6894.8

Length and Size Conversions		
<i>To convert from to</i>	<i>to</i>	<i>Multiply by</i>
angstroms . . . . .	inches . . . . .	$3.937 \times 10^{-9}$
centimeters . . . . .	inches . . . . .	0.3937
centimeters . . . . .	feet . . . . .	0.03281
feet . . . . .	centimeters. . . . .	30.48
feet . . . . .	meters. . . . .	0.3048
feet . . . . .	millimeters . . . . .	304.8
inches . . . . .	angstroms . . . . .	$1 \times 10^8$
inches . . . . .	centimeters. . . . .	2.540
inches . . . . .	meters . . . . .	0.02540
inches . . . . .	millimeters. . . . .	25.40.
meters . . . . .	angstroms . . . . .	$1 \times 10^{10}$
meters . . . . .	feet . . . . .	3.281
meters . . . . .	inches . . . . .	39.37
millimeters . . . . .	feet . . . . .	0.003281
millimeters . . . . .	inches . . . . .	0.03937

### Weight Conversions

<i>To convert from to</i>	<i>to</i>	<i>Multiply by</i>
dwt (pennyweight) . . . . .	grams . . . . .	1.555
dwt (pennyweight) . . . . .	ounces (avdp) . . . . .	0.05486
dwt (pennyweight) . . . . .	ounces (troy) . . . . .	0.0500
grams . . . . .	dwt (pennyweight) . . . . .	0.6430
grams . . . . .	ounces (avdp) . . . . .	0.03527
kilograms . . . . .	pounds ( avdp) . . . . .	2.205.
kilograms . . . . .	pounds (troy) . . . . .	2.679.
ounces (avdp) . . . . .	dwt (pennyweight) . . . . .	18.23.
ounces (avdp) . . . . .	grams . . . . .	28.35
ounces (avdp) . . . . .	ounces (troy) . . . . .	0.9115
ounces (troy) . . . . .	dwt (pennyweight) . . . . .	20.0
ounces (troy) . . . . .	ounces (avdp) . . . . .	1.097.
ounces (troy) . . . . .	pounds (avdp) . . . . .	0.06857
ounces (troy) . . . . .	pounds (troy). . . . .	0.08333
pennyweights . . . . .	(see dwt) . . . . .	
pounds (avdp) . . . . .	ounces (troy) . . . . .	14.58.
pounds (avdp) . . . . .	kilograms . . . . .	0.4536
pounds (troy) . . . . .	kilograms . . . . .	0.3732
pounds (troy) . . . . .	ounces (troy) . . . . .	12.00

### Miscellaneous Conversions

<i>To convert from to</i>	<i>to</i>	<i>Multiply by</i>
centimeters/sec . . . . .	ft/min . . . . .	1.9685
centimeters/sec . . . . .	inches/sec . . . . .	0.3937
ft/min . . . . .	inches/sec . . . . .	0.20
ft/min. . . . .	centimeters/sec . . . . .	0.508
gram-centimeters . . . . .	ounce-inches . . . . .	0.01389
inches/sec . . . . .	ft/min . . . . .	5.0
microhm cm. . . . .	ohm-cir. mil/ft . . . . .	6.015
ohm-cir. mil/ft . . . . .	microhm cm . . . . .	0.1662
ohm-cir. mil/ft . . . . .	ohm mm <sup>2</sup> /meter . . . . .	0.001662
ohms/ft . . . . .	ohms/meter . . . . .	3.281
ohms/meter . . . . .	ohms/ft . . . . .	0.3048
ohm mm <sup>2</sup> /meter . . . . .	ohm-cir. mil/ft . . . . .	601.5
ounce-inches . . . . .	gram-centimeters . . . . .	72.01