

| VOLUME          |                      |         |                       |                      |                       |                       |                      |         |         |                       |
|-----------------|----------------------|---------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|---------|---------|-----------------------|
| from/to         | cm <sup>3</sup>      | liter   | m <sup>3</sup>        | in <sup>3</sup>      | ft <sup>3</sup>       | yd <sup>3</sup>       | fl oz                | fl pt   | fl qt   | gal                   |
| cm <sup>3</sup> | 1                    | 0.001   | 1x10 <sup>-6</sup>    | 0.06102              | 3.53x10 <sup>-5</sup> | 1.31x10 <sup>-6</sup> | 0.03381              | 0.00211 | 0.00106 | 2.64x10 <sup>-4</sup> |
| liter           | 1000                 | 1       | 0.001                 | 61.02                | 0.03532               | 0.00131               | 33.81                | 2.113   | 1.057   | 0.2642                |
| m <sup>3</sup>  | 1x10 <sup>6</sup>    | 1000    | 1                     | 6.10x10 <sup>4</sup> | 35.31                 | 1.308                 | 3.38x10 <sup>4</sup> | 2113    | 1057    | 264.2                 |
| in <sup>3</sup> | 16.39                | 0.01639 | 1.64x10 <sup>-5</sup> | 1                    | 5.79x10 <sup>-4</sup> | 2.14x10 <sup>-5</sup> | 0.5541               | 0.03463 | 0.01732 | 0.00433               |
| ft <sup>3</sup> | 2.83x10 <sup>4</sup> | 28.32   | 0.02832               | 1728                 | 1                     | 0.03704               | 957.5                | 59.84   | 29.92   | 7.481                 |
| yd <sup>3</sup> | 7.65x10 <sup>5</sup> | 764.5   | 0.7646                | 4.67x10 <sup>4</sup> | 27                    | 1                     | 2.59x10 <sup>4</sup> | 1616    | 807.9   | 202.0                 |
| fl oz           | 29.57                | 0.02957 | 2.96x10 <sup>-5</sup> | 1.805                | 0.00104               | 3.87x10 <sup>-5</sup> | 1                    | 0.06250 | 0.03125 | 0.00781               |
| fl pt           | 473.2                | 0.4732  | 4.73x10 <sup>-4</sup> | 28.88                | 0.01671               | 6.19x10 <sup>-4</sup> | 16                   | 1       | 0.5000  | 0.1250                |
| fl qt           | 946.4                | 0.9463  | 9.46x10 <sup>-4</sup> | 57.75                | 0.03342               | 0.00124               | 32                   | 2       | 1       | 0.2500                |
| gal             | 3785                 | 3.785   | 0.00379               | 231.0                | 0.1337                | 0.00495               | 128                  | 8       | 4       | 1                     |

| AREA              |                       |                       |                        |                      |                      |                        |
|-------------------|-----------------------|-----------------------|------------------------|----------------------|----------------------|------------------------|
| from/to           | cm <sup>2</sup>       | m <sup>2</sup>        | km <sup>2</sup>        | in <sup>2</sup>      | ft <sup>2</sup>      | mile <sup>2</sup>      |
| cm <sup>2</sup>   | 1                     | 0.0001                | 1x10 <sup>-10</sup>    | 0.1550               | 0.00108              | 3.86x10 <sup>-11</sup> |
| m <sup>2</sup>    | 1x10 <sup>4</sup>     | 1                     | 1x10 <sup>-6</sup>     | 1550                 | 10.76                | 3.86x10 <sup>-7</sup>  |
| km <sup>2</sup>   | 1x10 <sup>10</sup>    | 1x10 <sup>6</sup>     | 1                      | 1.55x10 <sup>9</sup> | 1.08x10 <sup>7</sup> | 0.3861                 |
| in <sup>2</sup>   | 6.452                 | 6.45x10 <sup>-4</sup> | 6.45x10 <sup>-10</sup> | 1                    | 0.00694              | 2.49x10 <sup>-10</sup> |
| ft <sup>2</sup>   | 929.0                 | 0.09290               | 9.29x10 <sup>-8</sup>  | 144                  | 1                    | 3.59x10 <sup>-8</sup>  |
| mile <sup>2</sup> | 2.59x10 <sup>10</sup> | 2.59x10 <sup>6</sup>  | 2.590                  | 4.01x10 <sup>9</sup> | 2.79x10 <sup>7</sup> | 1                      |

| FLOW RATE            |         |         |                      |                      |
|----------------------|---------|---------|----------------------|----------------------|
| from/to              | lit/sec | gal/min | ft <sup>3</sup> /sec | ft <sup>3</sup> /min |
| lit/sec              | 1       | 15.85   | 0.03532              | 2.119                |
| gal/min              | 0.06309 | 1       | 0.00223              | 0.1337               |
| ft <sup>3</sup> /sec | 28.32   | 448.8   | 1                    | 60                   |
| ft <sup>3</sup> /min | 0.4719  | 7.481   | 0.01667              | 1                    |

| TEMPERATURE |      |     |     |     |     |     |      |
|-------------|------|-----|-----|-----|-----|-----|------|
| °C          | °F   | °C  | °F  | °C  | °F  | °C  | °F   |
| -200        | -328 | 25  | 77  | 240 | 464 | 540 | 1004 |
| -180        | -292 | 30  | 86  | 250 | 482 | 550 | 1022 |
| -160        | -256 | 35  | 95  | 260 | 500 | 560 | 1040 |
| -140        | -220 | 40  | 104 | 270 | 518 | 570 | 1058 |
| -120        | -184 | 45  | 113 | 280 | 536 | 580 | 1076 |
| -100        | -148 | 50  | 122 | 290 | 554 | 590 | 1094 |
| -95         | -139 | 55  | 131 | 300 | 572 | 600 | 1112 |
| -90         | -130 | 60  | 140 | 310 | 590 | 610 | 1130 |
| -85         | -121 | 65  | 149 | 320 | 608 | 620 | 1148 |
| -80         | -112 | 70  | 158 | 330 | 626 | 630 | 1166 |
| -75         | -103 | 75  | 167 | 340 | 644 | 640 | 1184 |
| -70         | -94  | 80  | 176 | 350 | 662 | 650 | 1202 |
| -65         | -85  | 85  | 185 | 360 | 680 | 660 | 1220 |
| -60         | -76  | 90  | 194 | 370 | 698 | 670 | 1238 |
| -55         | -67  | 95  | 203 | 380 | 716 | 680 | 1256 |
| -50         | -58  | 100 | 212 | 390 | 734 | 690 | 1274 |
| -45         | -49  | 110 | 230 | 400 | 752 | 700 | 1292 |
| -40         | -40  | 120 | 248 | 410 | 770 | 710 | 1310 |
| -35         | -31  | 130 | 266 | 420 | 788 | 720 | 1328 |
| -30         | -22  | 140 | 284 | 430 | 806 | 730 | 1346 |
| -25         | -13  | 150 | 302 | 440 | 824 | 740 | 1364 |
| -20         | -4   | 160 | 320 | 450 | 842 | 750 | 1382 |
| -15         | 5    | 170 | 338 | 460 | 860 | 760 | 1400 |
| -10         | 14   | 180 | 356 | 470 | 878 | 770 | 1418 |
| -5          | 23   | 190 | 374 | 480 | 896 | 780 | 1436 |
| 0           | 32   | 200 | 392 | 490 | 914 | 790 | 1454 |
| 5           | 41   | 210 | 410 | 500 | 932 | 800 | 1472 |
| 10          | 50   | 212 | 414 | 510 | 950 |     |      |
| 15          | 59   | 220 | 428 | 520 | 968 |     |      |
| 20          | 68   | 230 | 446 | 530 | 986 |     |      |

| PRESSURE            |       |         |                     |                     |                    |                    |
|---------------------|-------|---------|---------------------|---------------------|--------------------|--------------------|
| from/to             | mm Hg | in Hg   | in H <sub>2</sub> O | ft H <sub>2</sub> O | lb/in <sup>2</sup> | kg/cm <sup>2</sup> |
| mm Hg               | 1     | 0.03937 | 0.5353              | 0.04460             | 0.01934            | 0.00136            |
| in Hg               | 25.40 | 1       | 13.60               | 1.133               | 0.4912             | 0.03453            |
| in H <sub>2</sub> O | 1.868 | 0.07355 | 1                   | 0.08333             | 0.03613            | 0.00254            |
| ft H <sub>2</sub> O | 22.42 | 0.8826  | 12                  | 1                   | 0.4335             | 0.03048            |
| lb/in <sup>2</sup>  | 51.71 | 2.036   | 27.67               | 2.307               | 1                  | 0.07031            |
| kg/cm <sup>2</sup>  | 735.6 | 28.96   | 393.7               | 32.81               | 14.22              | 1                  |

| MASS           |              |
|----------------|--------------|
| 1 lb           | 16 oz        |
|                | 7000 grain   |
| 1 ton (short)  | 2000 lbs     |
| 1 ton (long)   | 2240 lbs     |
| 1 metric tonne | 2204.623 lbs |

| LENGTHS      |          |              |          |
|--------------|----------|--------------|----------|
| metric to US |          | US to metric |          |
| 1 cm         | .392 in  | 1 in         | 2.54 cm  |
| 1 m          | 39.37 in | 1 ft         | 30.48 cm |
| 1 m          | 3.277 ft | 1 yd         | 91.44 cm |
| 1 km         | 620 mile | 1 yd         | .914 m   |
|              |          | 1 mile       | 1.607 km |

| POWER    |                 |
|----------|-----------------|
| 1 Btu/hr | 0.293 watts     |
|          | 12.96 ft lb/min |
|          | 0.00039 hp      |
| 1 hp     | 550 ft lb/sec   |
|          | 746 watts       |
|          | 2545 Btu/hr     |
| 1 kw     | 3413 Btu/hr     |

| WEIGHT OF WATER                                       |         |           |
|---|---------|-----------|
| <i>Water is at its greatest density at 39.2 deg F</i> |         |           |
| 1 cu ft   | @39.2F= | 62.43 lbs |
| 1 cu ft   | @50F=   | 62.41 lbs |
| 1 cu ft   | @32F=   | 57.2 lbs  |
| 1 gal   | @50F=   | 8.32 lbs  |

Trenton Pipe Nipple Company does **NOT** provide engineering or application advice or information. The information on this page is provided as a general guideline or overview and is **NOT** intended to be a comprehensive statement of all the applicable technical information or data. There are numerous conditions, limiting factors and requirements set out in various technical standards and publications which have not been discussed in these guidelines. Accordingly, the advice of a qualified engineer or other professional should be followed when choosing or applying a product. While the information provided is believed to be from reliable sources, Trenton Pipe Nipple Company is not responsible for errors and omissions in the information / data provided—users are strongly advised to consult qualified professionals.