

## VISCOSIDAD CINEMÁTICA DE ALGUNOS LÍQUIDOS

| SUSTANCIA                                 | TEMPERATURA DE REFERENCIA (°C) | VISCOSIDAD CINEMÁTICA (cSt) |
|---|--------------------------------|-----------------------------|
| <b>LÍQUIDOS MISCELÁNEOS</b>               |                                |                             |
| PETRÓLEO CRUDO ( $\rho_r=0.925$ )         | 15.6                           | 85                          |
|   | 54.4                           | 18.5                        |
| PETRÓLEO CRUDO ( $\rho_r=0.855$ )         | 15.6                           | 8                           |
|   | 54.4                           | 3.7                         |
| PETRÓLEO CRUDO 48 API ( $\rho_r=0.78$ )   | 15.6                           | 3.8                         |
|   | 54.4                           | 1.6                         |
| PETRÓLEO CRUDO 40 API ( $\rho_r=0.81$ )   | 15.6                           | 9.7                         |
|   | 54.4                           | 3.5                         |
| PETRÓLEO CRUDO 35.6 API ( $\rho_r=0.83$ ) | 15.6                           | 17.8                        |
|   | 54.4                           | 4.9                         |
| PETRÓLEO CRUDO 32.6 API ( $\rho_r=0.85$ ) | 15.6                           | 23.2                        |
|   | 54.4                           | 7.1                         |
| KEROSENE ( $\rho_r=0.79$ )                | 20                             | 2.71                        |
|   | 40                             | 1.7                         |
| ALCOHOL ETÍLICO                           | 20                             | 1.5                         |
|   | 40                             | 1.05                        |
| ACETONA ( $\rho_r=0.792$ )                | 20-25                          | 0.41                        |
| ANILINA ( $\rho_r=1.03$ )                 | 10                             | 6.4                         |
|   | 20                             | 4.37                        |
| GASOLINA ( $\rho_r=0.74$ )                | 15.6                           | 0.88                        |
|   | 37.8                           | 0.71                        |
| GASOLINA ( $\rho_r=0.716$ )               | 15.6                           | 0.64                        |
|   | 37.8                           | 0.50                        |
| GASOLINA ( $\rho_r=0.68$ )                | 15.6                           | 0.46                        |
|   | 37.8                           | 0.40                        |
| ACIDO ACÉTICO 10% ( $\rho_r=1.014$ )      | 15                             | 1.35                        |
| ACIDO ACÉTICO 50% ( $\rho_r=1.061$ )      | 15                             | 2.27                        |
| ACIDO ACÉTICO 80% ( $\rho_r=1.075$ )      | 15                             | 2.85                        |
| ALCOHOL BUTÍLICO ( $\rho_r=0.80$ )        | 20                             | 3.64                        |
|   | 70                             | 1.17                        |
| ALCOHOL ETÍLICO ( $\rho_r=0.775$ )        | 20                             | 1.52                        |
|   | 37.8                           | 1.2                         |
| ALCOHOL METÍLICO ( $\rho_r=0.79$ )        | 15                             | 0.74                        |
|   | 0                              | 1.04                        |
| ALCOHOL PROPÍLICO ( $\rho_r=0.81$ )       | 20                             | 2.8                         |
|   | 50                             | 1.4                         |
| CERVEZA ( $\rho_r=1.01$ )                 | 20                             | 1.8                         |
| BENCENO ( $\rho_r=0.89$ )                 | 0                              | 1.0                         |
|   | 20                             | 0.744                       |
| ACEITE CASTOR ( $\rho_r=0.955$ )          | 37.8                           | 259-325                     |
|   | 54.4                           | 98-130                      |
| ACEITE DE MAÍZ ( $\rho_r=0.924$ )         | 54.4                           | 28.7                        |
|   | 100                            | 8.6                         |

$\rho_r$  = densidad relativa 60/60°F

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| ACEITE COMBUSTIBLE DIESEL 2D<br>( $\rho_r=0.82-0.95$ )      | 37.8                           | 2-6                         |
|   | 54.4                           | 1-3.97                      |
| ACEITE COMBUSTIBLE DIESEL 3D<br>( $\rho_r=0.82-0.95$ )      | 37.8                           | 6-11.75                     |
|   | 54.4                           | 3.97-6.78                   |
| ACEITE COMBUSTIBLE DIESEL 4D<br>( $\rho_r=0.82-0.95$ )      | 37.8                           | 29.8                        |
|   | 54.4                           | 13.1                        |
| ACEITE COMBUSTIBLE DIESEL 5D<br>( $\rho_r=0.82-0.95$ )      | 50                             | 86.6                        |
|   | 71.1                           | 35.2                        |
| ACEITE COMBUSTIBLE (Fuel oil) #1<br>( $\rho_r=0.82-0.95$ )  | 21.1                           | 2.39-4.28                   |
|   | 37.8                           | 1-2.69                      |
| ACEITE COMBUSTIBLE (Fuel oil) #2<br>( $\rho_r=0.82-0.95$ )  | 21.1                           | 3.0-7.4                     |
|   | 37.8                           | 2.11-4.28                   |
| ACEITE COMBUSTIBLE (Fuel oil) #3<br>( $\rho_r=0.82-0.95$ )  | 21.1                           | 2.69-5.84                   |
|   | 37.8                           | 2.06-3.97                   |
| ACEITE COMBUSTIBLE (Fuel oil) #5A<br>( $\rho_r=0.82-0.95$ ) | 21.1                           | 7.4-26.4                    |
|   | 37.8                           | 4.91-13.7                   |
| ACEITE COMBUSTIBLE (Fuel oil) #5B<br>( $\rho_r=0.82-0.95$ ) | 21.1                           | 26.4 mínimo                 |
|   | 37.8                           | 13.6-67.1                   |
| ACEITE COMBUSTIBLE (Fuel oil) #6<br>( $\rho_r=0.82-0.95$ )  | 50                             | 97.4-660                    |
|   | 71.1                           | 37.5-172                    |
| GLICERINA (100%) ( $\rho_r=1.260$ )                         | 20.3                           | 648                         |
|   | 37.8                           | 176                         |
| GLICERINA (Solución acuosa al 50%)<br>( $\rho_r=1.260$ )    | 20                             | 5.29                        |
|   | 60                             | 1.25                        |
| MIEL  | 37.8                           | 73.6                        |
| LECHE ( $\rho_r=1.03$ )                                     | 20                             | 1.13                        |
| ACEITE DE OLIVA ( $\rho_r=0.915$ )                          | 37.8                           | 43.2                        |
|   | 54.4                           | 24.1                        |
| ACEITE DE PALMA ( $\rho_r=0.924$ )                          | 37.8                           | 47.8                        |
|   | 54.4                           | 26.4                        |
| ACEITE DE MANÍ ( $\rho_r=0.92$ )                            | 37.8                           | 42                          |
|   | 54.4                           | 23.4                        |
| ACEITE DE ENFRIAMIENTO ( $\rho_r=0.87$ )                    | 20-30                          | 100-120                     |
| BARNIZ  | 20                             | 313                         |
|   | 37.8                           | 143                         |
| AGUA DESTILADA ( $\rho_r=1.00$ )                            | 20                             | 1.0038                      |
| AGUA FRESCA ( $\rho_r=1.0$ )                                | 15.6                           | 1.13                        |
|   | 54.4                           | 0.55                        |

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| <b>ACEITES LUBRICANTES DE MOTORES DE COMBUSTIÓN INTERNA</b> |                                |                             |
| SAE 5W-20 ( $\rho_r=0.88 - 0.94$ )                          | 20                             | 65                          |
|   | 40                             | 29                          |
| SAE 10W ( $\rho_r=0.88 - 0.94$ )                            | 20                             | 110                         |
|   | 40                             | 40                          |
| SAE 10W-30 ( $\rho_r=0.88 - 0.94$ )                         | 20                             | 145                         |
|   | 40                             | 65.5                        |
| SAE 20 ( $\rho_r=0.88 - 0.94$ )                             | 20                             | 200                         |
|   | 40                             | 65                          |
| SAE 20W ( $\rho_r=0.88 - 0.94$ )                            | 20                             | 200                         |
|   | 40                             | 65                          |
| SAE 20W-40 ( $\rho_r=0.88 - 0.94$ )                         | 20                             | 305                         |
|   | 40                             | 100                         |
| SAE 30 ( $\rho_r=0.88 - 0.94$ )                             | 20                             | 340                         |
|   | 40                             | 106                         |
| SAE 40 ( $\rho_r=0.88 - 0.94$ )                             | 20                             | 590                         |
|   | 40                             | 155                         |
| SAE 50 ( $\rho_r=0.88 - 0.94$ )                             | 20                             | 940                         |
|   | 40                             | 230                         |
| <b>ACEITES LUBRICANTES PARA ENGRANAJES DE AUTOMÓVILES</b>   |                                |                             |
| SAE 75W ( $\rho_r=0.88 - 0.94$ )                            | 99                             | 4.2 mínimo                  |
| SAE 80W ( $\rho_r=0.88 - 0.94$ )                            | 99                             | 7.0 mínimo                  |
| SAE 85W ( $\rho_r=0.88 - 0.94$ )                            | 99                             | 11.0 mínimo                 |
| SAE 90 ( $\rho_r=0.88 - 0.94$ )                             | 99                             | 14-25                       |
| SAE 140 ( $\rho_r=0.88 - 0.94$ )                            | 99                             | 25-43                       |
| SAE 150 ( $\rho_r=0.88 - 0.94$ )                            | 99                             | 43 mínimo                   |
| SAE 250 ( $\rho_r=0.88 - 0.94$ )                            | 40                             | 1000                        |
|   | 90                             | 80                          |
| <b>ACEITES LUBRICANTES INDUSTRIALES</b>                     |                                |                             |
| ACEITE DE TURBINA DE 685 SSU A 100°F                        | 15.6                           | 647                         |
|   | 93.3                           | 14.5                        |
| ACEITE DE TURBINA DE 420 SSU A 100°F                        | 15.6                           | 367                         |
|   | 93.3                           | 11                          |
| ACEITE DE TURBINA DE 315 SSU A 100°F                        | 15.6                           | 259                         |
|   | 93.3                           | 8                           |
| ACEITE DE TURBINA DE 215 SSU A 100°F                        | 15.6                           | 151                         |
|   | 93.3                           | 7.3                         |
| ACEITE DE TURBINA DE 150 SSU A 100°F                        | 15.6                           | 99                          |
|   | 93.3                           | 6                           |

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| LUBRICANTE DE MÁQUINA # 8<br>( $\rho_r=0.88 - 0.94$ )  | 37.8                           | 23-34                       |
|  | 54.4                           | 13-18                       |
| LUBRICANTE DE MÁQUINA # 10<br>( $\rho_r=0.88 - 0.94$ ) | 37.8                           | 34-72                       |
|  | 54.4                           | 18-25                       |
| LUBRICANTE DE MÁQUINA # 20<br>( $\rho_r=0.88 - 0.94$ ) | 37.8                           | 72-83                       |
|  | 54.4                           | 25-39                       |
| LUBRICANTE DE MÁQUINA # 30<br>( $\rho_r=0.88 - 0.94$ ) | 37.8                           | 75-119                      |
|  | 54.4                           | 39-55                       |
| ACEITE PARA CORTE #1                                   | 37.8                           | 30-40                       |
|  | 54.4                           | 17-23                       |
| ACEITE PARA CORTE #2                                   | 37.8                           | 40-46                       |
|  | 54.4                           | 23-26                       |
| <b>LÍQUIDOS REFRIGERANTES</b>                          |                                |                             |
| FREON 13   | 20                             | 0.45                        |
|  | 40                             | 0.37                        |
| FREON 11   | 20                             | 0.30                        |
|  | 40                             | 0.26                        |
| FREON 114  | 20                             | 0.26                        |
|  | 40                             | 0.23                        |
| FREON 21   | 20                             | 0.25                        |
|  | 40                             | 0.23                        |
| FREON 12   | 20                             | 0.198                       |
|  | 40                             | 0.191                       |
| FREON 22   | 20                             | 0.198                       |
|  | 40                             | 0.195                       |
| DIOXIDO DE CARBONO                                     | 10                             | 0.1                         |
|  | 20                             | 0.98                        |
| DIOXIDO DE SULFURO                                     | 10                             | 0.23                        |
|  | 20                             | 0.22                        |
| CLORURO METÁLICO                                       | 20                             | 0.26                        |
|  | 40                             | 0.245                       |
| AMONÍACO   | 20                             | 0.35                        |
|  | 40                             | 0.345                       |

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