



**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Temp. (°C) | 750                         | 751  | 752  | 753  | 754  | 755  | 756  | 757  | 758  | 759  | 760  | 761  | 762  | 763  | 764  | 765  | 766  | 767  | 768  | 769  | 770  |
| 3.6        | 13.1                        | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 |
| 3.7        | 13.0                        | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.4 | 13.4 | 13.4 |
| 3.8        | 13.0                        | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.4 |
| 3.9        | 13.0                        | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.3 | 13.3 |
| 4.0        | 12.9                        | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 |
| 4.1        | 12.9                        | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| 4.2        | 12.9                        | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.2 |
| 4.3        | 12.8                        | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 |
| 4.4        | 12.8                        | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 |
| 4.5        | 12.8                        | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 |
| 4.6        | 12.7                        | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 |
| 4.7        | 12.7                        | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 4.8        | 12.7                        | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 |
| 4.9        | 12.6                        | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 |
| 5.0        | 12.6                        | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9 |
| 5.1        | 12.6                        | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 12.9 |
| 5.2        | 12.5                        | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 |
| 5.3        | 12.5                        | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 |
| 5.4        | 12.5                        | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 |
| 5.5        | 12.4                        | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.8 | 12.8 |
| 5.6        | 12.4                        | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 |
| 5.7        | 12.4                        | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 | 12.7 | 12.7 |
| 5.8        | 12.3                        | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.7 | 12.7 |
| 5.9        | 12.3                        | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 |
| 6.0        | 12.3                        | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 |
| 6.1        | 12.3                        | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.6 | 12.6 |
| 6.2        | 12.2                        | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| 6.3        | 12.2                        | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| 6.4        | 12.2                        | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5 |
| 6.5        | 12.1                        | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.5 |
| 6.6        | 12.1                        | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 |
| 6.7        | 12.1                        | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 | 12.4 | 12.4 |
| 6.8        | 12.0                        | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.4 |
| 6.9        | 12.0                        | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 |
| 7.0        | 12.0                        | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 | 12.3 | 12.3 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Temp. (°C) | 750                         | 751  | 752  | 753  | 754  | 755  | 756  | 757  | 758  | 759  | 760  | 761  | 762  | 763  | 764  | 765  | 766  | 767  | 768  | 769  | 770  |
| 7.1        | 11.9                        | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 |
| 7.2        | 11.9                        | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 |
| 7.3        | 11.9                        | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 | 12.2 | 12.2 |
| 7.4        | 11.9                        | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.2 | 12.2 |
| 7.5        | 11.8                        | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 |
| 7.6        | 11.8                        | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 |
| 7.7        | 11.8                        | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 |
| 7.8        | 11.7                        | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.1 |
| 7.9        | 11.7                        | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 8.0        | 11.7                        | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 | 12.0 | 12.0 |
| 8.1        | 11.7                        | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 12.0 |
| 8.2        | 11.6                        | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 |
| 8.3        | 11.6                        | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 |
| 8.4        | 11.6                        | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 11.9 | 11.9 |
| 8.5        | 11.5                        | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 |
| 8.6        | 11.5                        | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 |
| 8.7        | 11.5                        | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 |
| 8.8        | 11.5                        | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.8 | 11.8 |
| 8.9        | 11.4                        | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 |
| 9.0        | 11.4                        | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 |
| 9.1        | 11.4                        | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 | 11.7 | 11.7 |
| 9.2        | 11.4                        | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.7 |
| 9.3        | 11.3                        | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 |
| 9.4        | 11.3                        | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 | 11.6 | 11.6 |
| 9.5        | 11.3                        | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.6 | 11.6 |
| 9.6        | 11.2                        | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| 9.7        | 11.2                        | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| 9.8        | 11.2                        | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 | 11.5 |
| 9.9        | 11.2                        | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5 | 11.5 |
| 10.0       | 11.1                        | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 |
| 10.1       | 11.1                        | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 |
| 10.2       | 11.1                        | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 | 11.4 | 11.4 |
| 10.3       | 11.1                        | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.4 |
| 10.4       | 11.0                        | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 |
| 10.5       | 11.0                        | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 | 11.3 | 11.3 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**

Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Temp. (°C) | 750                         | 751  | 752  | 753  | 754  | 755  | 756  | 757  | 758  | 759  | 760  | 761  | 762  | 763  | 764  | 765  | 766  | 767  | 768  | 769  | 770  |
| 10.6       | 11.0                        | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.3 |
| 10.7       | 11.0                        | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 |
| 10.8       | 10.9                        | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 |
| 10.9       | 10.9                        | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 | 11.2 | 11.2 |
| 11.0       | 10.9                        | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.2 | 11.2 |
| 11.1       | 10.9                        | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| 11.2       | 10.8                        | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| 11.3       | 10.8                        | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.1 |
| 11.4       | 10.8                        | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 |
| 11.5       | 10.8                        | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 11.6       | 10.7                        | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 11.7       | 10.7                        | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 | 11.0 | 11.0 |
| 11.8       | 10.7                        | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 11.0 | 11.0 |
| 11.9       | 10.7                        | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 |
| 12.0       | 10.6                        | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 |
| 12.1       | 10.6                        | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 |
| 12.2       | 10.6                        | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.9 | 10.9 |
| 12.3       | 10.6                        | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 |
| 12.4       | 10.5                        | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 |
| 12.5       | 10.5                        | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 | 10.8 | 10.8 |
| 12.6       | 10.5                        | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.8 | 10.8 |
| 12.7       | 10.5                        | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 |
| 12.8       | 10.4                        | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7 |
| 12.9       | 10.4                        | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 | 10.7 | 10.7 |
| 13.0       | 10.4                        | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 | 10.7 |
| 13.1       | 10.4                        | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.7 |
| 13.2       | 10.3                        | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 |
| 13.3       | 10.3                        | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 |
| 13.4       | 10.3                        | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 | 10.6 |
| 13.5       | 10.3                        | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 |
| 13.6       | 10.3                        | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 13.7       | 10.2                        | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| 13.8       | 10.2                        | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 | 10.5 |
| 13.9       | 10.2                        | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.5 | 10.5 |
| 14.0       | 10.2                        | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Temp. (°C) | 750                         | 751  | 752  | 753  | 754  | 755  | 756  | 757  | 758  | 759  | 760  | 761  | 762  | 763  | 764  | 765  | 766  | 767  | 768  | 769  | 770  |
| 14.1       | 10.1                        | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 |
| 14.2       | 10.1                        | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 | 10.4 | 10.4 |
| 14.3       | 10.1                        | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 | 10.4 |
| 14.4       | 10.1                        | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.4 |
| 14.5       | 10.1                        | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 |
| 14.6       | 10.0                        | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 |
| 14.7       | 10.0                        | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 | 10.3 | 10.3 |
| 14.8       | 10.0                        | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.3 |
| 14.9       | 10.0                        | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 |
| 15.0       | 9.9                         | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 | 10.2 |
| 15.1       | 9.9                         | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 | 10.2 | 10.2 |
| 15.2       | 9.9                         | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.2 |
| 15.3       | 9.9                         | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 |
| 15.4       | 9.9                         | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 |
| 15.5       | 9.8                         | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 |
| 15.6       | 9.8                         | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 | 10.1 |
| 15.7       | 9.8                         | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.1 | 10.1 |
| 15.8       | 9.8                         | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 15.9       | 9.8                         | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 16.0       | 9.7                         | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 | 10.0 |
| 16.1       | 9.7                         | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 | 10.0 | 10.0 |
| 16.2       | 9.7                         | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 10.0 |
| 16.3       | 9.7                         | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  |
| 16.4       | 9.7                         | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  | 9.9  |
| 16.5       | 9.6                         | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  | 9.9  |
| 16.6       | 9.6                         | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  | 9.9  | 9.9  |
| 16.7       | 9.6                         | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.9  |
| 16.8       | 9.6                         | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  |
| 16.9       | 9.6                         | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  | 9.8  |
| 17.0       | 9.5                         | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  | 9.8  | 9.8  |
| 17.1       | 9.5                         | 9.5  | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  | 9.8  |
| 17.2       | 9.5                         | 9.5  | 9.5  | 9.5  | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.8  |
| 17.3       | 9.5                         | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  |
| 17.4       | 9.5                         | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  | 9.7  |
| 17.5       | 9.4                         | 9.4  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.6  | 9.7  | 9.7  | 9.7  | 9.7  |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Temp. (°C) | 750                         | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 |
| 17.6       | 9.4                         | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.7 | 9.7 |
| 17.7       | 9.4                         | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.7 |
| 17.8       | 9.4                         | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 |
| 17.9       | 9.4                         | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 |
| 18.0       | 9.3                         | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.6 |
| 18.1       | 9.3                         | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 |
| 18.2       | 9.3                         | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.6 |
| 18.3       | 9.3                         | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 18.4       | 9.3                         | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 18.5       | 9.2                         | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 |
| 18.6       | 9.2                         | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 |
| 18.7       | 9.2                         | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 |
| 18.8       | 9.2                         | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| 18.9       | 9.2                         | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| 19.0       | 9.2                         | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| 19.1       | 9.1                         | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 |
| 19.2       | 9.1                         | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 |
| 19.3       | 9.1                         | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 |
| 19.4       | 9.1                         | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 |
| 19.5       | 9.1                         | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 |
| 19.6       | 9.0                         | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.3 |
| 19.7       | 9.0                         | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 |
| 19.8       | 9.0                         | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 |
| 19.9       | 9.0                         | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| 20.0       | 9.0                         | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| 20.1       | 9.0                         | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 |
| 20.2       | 8.9                         | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 |
| 20.3       | 8.9                         | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.2 |
| 20.4       | 8.9                         | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| 20.5       | 8.9                         | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| 20.6       | 8.9                         | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| 20.7       | 8.8                         | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.1 |
| 20.8       | 8.8                         | 8.8 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 |
| 20.9       | 8.8                         | 8.8 | 8.8 | 8.8 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.1 |
| 21.0       | 8.8                         | 8.8 | 8.8 | 8.8 | 8.8 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**

Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

[illegible]

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Temp. (°C) | 750                         | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 |
| 24.6       | 8.2                         | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 24.7       | 8.2                         | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 24.8       | 8.2                         | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 24.9       | 8.2                         | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 |
| 25.0       | 8.2                         | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 |
| 25.1       | 8.1                         | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 |
| 25.2       | 8.1                         | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 25.3       | 8.1                         | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 25.4       | 8.1                         | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 25.5       | 8.1                         | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 25.6       | 8.1                         | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 25.7       | 8.0                         | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 |
| 25.8       | 8.0                         | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 |
| 25.9       | 8.0                         | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 26.0       | 8.0                         | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 26.1       | 8.0                         | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 26.2       | 8.0                         | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 26.3       | 8.0                         | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 |
| 26.4       | 7.9                         | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 |
| 26.5       | 7.9                         | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 26.6       | 7.9                         | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 26.7       | 7.9                         | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 26.8       | 7.9                         | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 26.9       | 7.9                         | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 |
| 27.0       | 7.9                         | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.1 |
| 27.1       | 7.8                         | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 |
| 27.2       | 7.8                         | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 27.3       | 7.8                         | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 27.4       | 7.8                         | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 27.5       | 7.8                         | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| 27.6       | 7.8                         | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 |
| 27.7       | 7.8                         | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 |
| 27.8       | 7.7                         | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 |
| 27.9       | 7.7                         | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 28.0       | 7.7                         | 7.7 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**

Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

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**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**

Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Temp. (°C) | 750                         | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 |
| 31.6       | 7.3                         | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.5 |
| 31.7       | 7.2                         | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| 31.8       | 7.2                         | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| 31.9       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| 32.0       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| 32.1       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| 32.2       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 |
| 32.3       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 |
| 32.4       | 7.2                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 |
| 32.5       | 7.1                         | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 32.6       | 7.1                         | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 32.7       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 32.8       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 32.9       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 33.0       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.3 |
| 33.1       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 |
| 33.2       | 7.1                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 |
| 33.3       | 7.0                         | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.4       | 7.0                         | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.5       | 7.0                         | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.6       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.7       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.8       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 |
| 33.9       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.2 |
| 34.0       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 |
| 34.1       | 7.0                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.2 |
| 34.2       | 6.9                         | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.3       | 6.9                         | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.4       | 6.9                         | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.5       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.6       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.7       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 |
| 34.8       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.1 |
| 34.9       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 |
| 35.0       | 6.9                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**

Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

|            | Barometric Pressure (mm Hg) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Temp. (°C) | 750                         | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 |
| 35.1       | 6.8                         | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 35.2       | 6.8                         | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 35.3       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 35.4       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 35.5       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 35.6       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 |
| 35.7       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 | 7.0 |
| 35.8       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 7.0 |
| 35.9       | 6.8                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.0       | 6.7                         | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.1       | 6.7                         | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.2       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.3       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.4       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 |
| 36.5       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 |
| 36.6       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 |
| 36.7       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 |
| 36.8       | 6.7                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 36.9       | 6.6                         | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 37.0       | 6.6                         | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 37.1       | 6.6                         | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 37.2       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 37.3       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 37.4       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 | 6.8 |
| 37.5       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 | 6.8 |
| 37.6       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.8 |
| 37.7       | 6.6                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 37.8       | 6.5                         | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 37.9       | 6.5                         | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 38.0       | 6.5                         | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 38.1       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 38.2       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| 38.3       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 |
| 38.4       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 |
| 38.5       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 |

**Solubility of oxygen in fresh water at various temperatures and pressures. (Solubility shown in milligrams per liter.)**Values based on published equations by Benson and Krause (1980 and 1984). Results from DOTABLES program at <https://water.usgs.gov/software/DOTABLES/>.

| Temp. (°C) | Barometric Pressure (mm Hg) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | 750                         | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 |
| 38.6       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 38.7       | 6.5                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 38.8       | 6.4                         | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 38.9       | 6.4                         | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 39.0       | 6.4                         | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 39.1       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| 39.2       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 |
| 39.3       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 |
| 39.4       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | 6.6 |
| 39.5       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 |
| 39.6       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 39.7       | 6.4                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 39.8       | 6.3                         | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 39.9       | 6.3                         | 6.3 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 40.0       | 6.3                         | 6.3 | 6.3 | 6.3 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |