

IceClear HD

**APPROXIMATE MINIMUM FLOW RATES (GPM)
FOR TURBULANCE (REYNOLD's # OF 2500 MINIMUM)**

| GPM 3/4" DR-11 HDPE (ID=0.859") | | | | | | | |
|------------------------------------|-----------------------|-------|-------|-------|------|------|-------|
| Concentration IceClear HD (Vol) | Fluid Temperature (F) | | | | | | |
| | 15 | 23 | 32 | 40 | 50 | 60 | 70 |
| *20% | - | - | 1.78 | 1.54 | 1.28 | 1.12 | 0.956 |
| *30% | - | - | 2.22 | 1.91 | 1.56 | 1.35 | 1.14 |
| *40% | - | 3.41 | 2.86 | 2.41 | 1.95 | 1.68 | 1.41 |
| *50% | 5.62 | 4.54 | 3.64 | 3.01 | 2.43 | 2.07 | 1.73 |
| 75% | 12.29 | 9.28 | 7.32 | 5.93 | 4.58 | 3.84 | 3.1 |
| 90% | 23.27 | 17.13 | 12.67 | 10.08 | 7.48 | 6.19 | 4.83 |
| 100% | 34.36 | 24.23 | 17.47 | 13.66 | 10.2 | 8.27 | 6.35 |

| GPM 1" DR-11 HDPE (ID=1.076") | | | | | | | |
|------------------------------------|-----------------------|-------|-------|-------|-------|-------|------|
| Concentration IceClear HD (Vol) | Fluid Temperature (F) | | | | | | |
| | 15 | 23 | 32 | 40 | 50 | 60 | 70 |
| *20% | - | - | 2.23 | 1.93 | 1.6 | 1.4 | 1.2 |
| *30% | - | - | 2.79 | 2.39 | 1.96 | 1.69 | 1.43 |
| *40% | - | 4.27 | 3.59 | 3.04 | 5.1 | 2.11 | 1.76 |
| *50% | 7.03 | 5.69 | 4.55 | 3.77 | 3.05 | 2.6 | 2.16 |
| 75% | 15.38 | 11.63 | 9.16 | 7.43 | 5.74 | 4.81 | 3.89 |
| 90% | 29.14 | 21.45 | 15.87 | 12.61 | 9.37 | 7.75 | 6.05 |
| 100% | 43.02 | 30.34 | 21.86 | 17.33 | 12.77 | 10.36 | 7.95 |

| GPM 1 1/4" DR-11 HDPE (ID=1.358") | | | | | | | |
|------------------------------------|-----------------------|-------|-------|-------|-------|------|-------|
| Concentration IceClear HD (Vol) | Fluid Temperature (F) | | | | | | |
| | 15F | 23F | 32 | 40 | 50 | 60 | 70 |
| *20% | - | - | 2.84 | 2.46 | 2.03 | 1.77 | 1.51 |
| *30% | - | - | 3.5 | 2.96 | 2.45 | 2.1 | 1.79 |
| *40% | - | 5.39 | 4.52 | 3.83 | 3.64 | 2.62 | 2.22 |
| *50% | 9.86 | 7.17 | 5.75 | 4.76 | 4.77 | 3.28 | 2.69 |
| 75% | 19.05 | 14.58 | 11.28 | 11.41 | 7.1 | 6.05 | 4.8 |
| 90% | 35.44 | 26.07 | 18.93 | 15.51 | 11.92 | 9.42 | 5.19 |
| 100% | 53.32 | 38.30 | 27.62 | 21.76 | 16.04 | 13 | 10.07 |

| GPM 1 1/2" DR-11 HDPE (ID=1.555") | | | | | | | |
|-----------------------------------|-----------------------|-------|-------|-------|-------|-------|-------|
| Concentration | Fluid Temperature (F) | | | | | | |
| IceClear HD (Vol) | 15 | 23 | 32 | 40 | 50 | 60 | 70 |
| *20% | - | - | 3.22 | 2.79 | 2.32 | 2.02 | 1.73 |
| *30% | - | - | 4.03 | 3.46 | 2.82 | 2.45 | 2.07 |
| *40% | - | 6.18 | 5.18 | 4.38 | 3.54 | 3.04 | 2.55 |
| *50% | 10.17 | 8.22 | 6.58 | 5.45 | 4.4 | 3.75 | 3.12 |
| 75% | 22.22 | 16.8 | 13.24 | 10.75 | 8.29 | 6.95 | 5.61 |
| 90% | 42.12 | 31 | 22.71 | 18.29 | 13.54 | 11.19 | 8.73 |
| 100% | 62.21 | 43.85 | 31.59 | 25.45 | 18.46 | 14.98 | 11.49 |

| GPM 2" DR-11 HDPE (ID=1.943") | | | | | | | |
|-------------------------------|-----------------------|-------|-------|-------|-------|-------|-------|
| Concentration | Fluid Temperature (F) | | | | | | |
| IceClear HD (Vol) | 15 | 23 | 32 | 40 | 50 | 60 | 70 |
| *20% | - | - | 4.02 | 3.49 | 2.9 | 2.53 | 2.17 |
| *30% | - | - | 5.03 | 4.32 | 3.53 | 3.06 | 2.58 |
| *40% | - | 7.72 | 6.48 | 5.48 | 4.42 | 3.8 | 3.18 |
| *50% | 12.7 | 10.27 | 8.22 | 6.81 | 5.5 | 4.7 | 3.9 |
| 75% | 27.76 | 21 | 16.54 | 13.42 | 10.36 | 8.68 | 7.02 |
| 90% | 52.63 | 38.73 | 28.66 | 22.77 | 16.92 | 13.99 | 10.92 |
| 100% | 77.72 | 54.79 | 39.47 | 31.28 | 23.06 | 18.72 | 14.35 |

* May be subject to bacterial contamination. Addition of non-oxidizing biocide recommended.

- Concentration not recommended due to insufficient freeze protection

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