

# ASTM Thermometers



| ASTM | IP  | Name                    | Range+T°       | Division<br>mm | Immersion<br>mm | Length<br>mm | ASTM | IP  | Name                       | Range+T°      | Division<br>mm | Immersion<br>mm | Length<br>mm |
|------|-----|-------------------------|----------------|----------------|-----------------|--------------|------|-----|----------------------------|---------------|----------------|-----------------|--------------|
| 1C   | -   | Partial immersion       | -20 +150°C     | 1              | 76              | 322          | 43C  | 65C | Kinematic Viscosity        | 51.6 -34°C    | 0.1            | Total           | 420          |
| 1F   | -   | Partial immersion       | 0 +302°F       | 2              | 76              | 322          | 43F  | 65F | Kinematic Viscosity        | -61 -29°F     | 0.2            | Total           | 420          |
| 2C   | 62C | Partial immersion       | -5 +300°C      | 1              | 76              | 390          | 44C  | 29C | Kinematic Viscosity        | 18.6 +21.4°C  | 0.05           | Total           | 305          |
| 2F   | 62F | Partial immersion       | 20 +580°F      | 2              | 76              | 390          | 44F  | 29F | Kinematic Viscosity        | 66.5 +71.5°F  | 0.1            | Total           | 305          |
| 3C   | 73C | Partial immersion       | -5 +400°C      | 1              | 76              | 415          | 45C  | 30C | Kinematic Viscosity        | 23.6 +26.4°C  | 0.05           | Total           | 305          |
| 3F   | 73F | Partial immersion       | 20 +760°F      | 2              | 76              | 415          | 45F  | 30F | Kinematic Viscosity        | 74.5 +79.5°F  | 0.1            | Total           | 305          |
| 5C   | 1C  | Cloud and Pour          | -38 +50°C      | 1              | 108             | 230          | 46C  | 66C | Kinematic Viscosity        | 48.6 +51.4°C  | 0.05           | Total           | 305          |
| 5F   | 1F  | Cloud and Pour          | -36 +120°F     | 2              | 108             | 230          | 46F  | 66F | Kinematic Viscosity        | 119.5 +124.5° | 0.1            | Total           | 305          |
| 6C   | 2C  | Low Cloud and Pour      | -80 +20°C      | 1              | 76              | 230          | 47C  | 35C | Kinematic Viscosity        | 58.6 +61.4°C  | 0.05           | Total           | 305          |
| 6F   | 2F  | Low Cloud and Pour      | -112 +70°F     | 2              | 76              | 230          | 47F  | 35F | Kinematic Viscosity        | 137.5 +142.5° | 0.1            | Total           | 305          |
| 7C   | 5C  | Low Distillation        | -2 +300°C      | 1              | Total           | 385          | 48C  | 90C | Kinematic Viscosity        | 80.6 +83.4°C  | 0.05           | Total           | 305          |
| 7F   | -   | Low Distillation        | 30 +580°F      | 2              | Total           | 385          | 48F  | 90F | Kinematic Viscosity        | 177.5 +182.5° | 0.1            | Total           | 305          |
| 8C   | 6C  | High Distillation       | -2 +400°C      | 1              | Total           | 385          | 49C  | -   | Stormer Viscosity          | 20 +70°C      | 0.2            | 65              | 305          |
| 8F   | -   | High Distillation       | 30 +760°F      | 2              | Total           | 385          | 50F  | -   | Gas Calorimeter Inlet      | 54 +101°F     | 0.1            | Total           | 468          |
| 9C   | 15C | Low Pensky Martens      | -5 +110°C      | 0.5            | 57              | 290          | 51F  | -   | Gas Calorimeter Inlet      | 69 +116°F     | 0.1            | Total           | 468          |
| 9F   | 15F | Low Pensky Martens      | 20 +230°F      | 1              | 57              | 290          | 52C  | -   | Butadiene Boiling Point    | -10 +5°C      | 0.1            | Total           | 162          |
| 10C  | 16C | High Pensky Martens     | 90 +370°C      | 2              | 57              | 290          | 54C  | 18C | Congealing Point           | 20 +100.6°    | 0.2            | Total           | 310          |
| 10F  | 16F | High Pensky Martens     | 200 +700°F     | 5              | 57              | 290          | 54F  | 18F | Congealing Point           | 68 +213°F     | 0.5            | Total           | 310          |
| 11C  | 28C | Cleveland Open Flash    | -6 +400°C      | 2              | 25              | 310          | 56C  | -   | Bomb Calorimeter           | 19 +35°C      | 0.02           | Total           | 600          |
| 11F  | 28F | Cleveland Open Flash    | 20 +760°F      | 5              | 25              | 310          | 56F  | -   | Bomb Calorimeter           | 66 +95°F      | 0.05           | Total           | 600          |
| 12C  | 64C | Density-Wide Range      | -20 +102°C     | 0.2            | Total           | 420          | 57C  | -   | Tag Closed                 | -20 +50°C     | 0.5            | 57              | 287          |
| 12F  | 64F | Density-Wide Range      | -5 +215°F      | 0.5            | Total           | 420          | 57F  | -   | Tag Closed                 | -4 +122°F     | 1              | 57              | 287          |
| 13C  | 47C | Loss on Heat            | 115 +170°C     | 0.5            | Total           | 155          | 58C  | -   | Tank                       | -34 +49°C     | 0.5            | Total           | 305          |
| 14C  | 17C | Wax Melting Point       | 38 +82°C       | 0.1            | 79              | 375          | 58F  | -   | Tank                       | -30 +120°F    | 1              | Total           | 305          |
| 14F  | 17F | Wax Melting Point       | 100 +180°F     | 0.2            | 79              | 375          | 59C  | -   | Tank                       | -18 +82°C     | 0.5            | Total           | 305          |
| 15C  | 60C | Low Softening Point     | -2 +80°C       | 0.2            | Total           | 395          | 59F  | -   | Tank                       | 0 +180°F      | 1              | Total           | 305          |
| 15F  | -   | Low Softening Point     | 30 +180°F      | 0.5            | Total           | 395          | 60C  | -   | Tank                       | 77 +260°C     | 1              | Total           | 305          |
| 16C  | 61C | High Softening Point    | 30 +200°C      | 0.5            | Total           | 395          | 60F  | -   | Tank                       | 170 +500°F    | 2              | Total           | 305          |
| 16F  | -   | High Softening Point    | 85 +392°F      | 1              | Total           | 395          | 61C  | 63C | Petrolatum Melting Point   | 32 +127°C     | 0.2            | 79              | 380          |
| 17C  | -   | Saybolt Viscosity       | 19 +27°C       | 0.1            | Total           | 275          | 61F  | -   | Petrolatum Melting Point   | 90 +260°F     | 0.5            | 79              | 380          |
| 17F  | -   | Saybolt Viscosity       | 66 +80°F       | 0.2            | Total           | 275          | 62C  | -   | Precision                  | -38 +2°C      | 0.1            | Total           | 379          |
| 18C  | 23C | Reid Vapour Pressure    | 34 +42°C       | 0.1            | Total           | 275          | 62F  | -   | Precision                  | -36 +35°F     | 0.2            | Total           | 379          |
| 18F  | 23F | Reid Vapour Pressure    | 94 +108°F      | 0.2            | Total           | 275          | 63C  | -   | Precision                  | -8 +32°C      | 0.1            | Total           | 379          |
| 19C  | -   | Saybolt Viscosity       | 49 +57°C       | 0.1            | Total           | 275          | 63F  | -   | Precision                  | 18 +89°F      | 0.2            | Total           | 379          |
| 19F  | -   | Saybolt Viscosity       | 120 +134°F     | 0.2            | Total           | 275          | 64C  | -   | Precision                  | 25 +55°C      | 0.1            | Total           | 379          |
| 20C  | -   | Saybolt Viscosity       | 57 +65°C       | 0.1            | Total           | 275          | 64F  | -   | Precision                  | 77 +131°F     | 0.2            | Total           | 379          |
| 20F  | -   | Saybolt Viscosity       | 134 +148°F     | 0.2            | Total           | 275          | 65C  | -   | Precision                  | 50 +80°C      | 0.1            | Total           | 379          |
| 21C  | -   | Saybolt Viscosity       | 79 +87°C       | 0.1            | Total           | 275          | 65F  | -   | Precision                  | 122 +176°F    | 0.2            | Total           | 379          |
| 21F  | -   | Saybolt Viscosity       | 174 +188°F     | 0.2            | Total           | 275          | 66C  | -   | Precision                  | 75 +105°C     | 0.1            | Total           | 379          |
| 22C  | 24C | Oxidation Stability     | 95 +103°C      | 0.1            | Total           | 275          | 66F  | -   | Precision                  | 167 +221°F    | 0.2            | Total           | 379          |
| 22F  | 24F | Oxidation Stability     | 204 +218°F     | 0.2            | Total           | 275          | 67C  | -   | Precision                  | 95 +155°C     | 0.2            | Total           | 379          |
| 23C  | -   | Engler Viscosity        | 18 +28°C       | 0.2            | 90              | 212          | 67F  | -   | Precision                  | 203 +311°F    | 0.5            | Total           | 379          |
| 24C  | -   | Engler Viscosity        | 39 +54°C       | 0.2            | 90              | 237          | 68C  | -   | Precision                  | 145 +205°C    | 0.2            | Total           | 379          |
| 25C  | -   | Engler Viscosity        | 95 +105°C      | 0.2            | 90              | 212          | 68F  | -   | Precision                  | 293 +401°F    | 0.5            | Total           | 379          |
| 26C  | -   | Stability Test          | 130 +140°C     | 0.1            | Total           | 463          | 69C  | -   | Precision                  | 195 +305°C    | 0.5            | Total           | 379          |
| 27C  | -   | Turpentine Distillation | 147 +182°C     | 0.5            | 76              | 301          | 69F  | -   | Precision                  | 383 +581°F    | 1              | Total           | 379          |
| 28C  | 31C | Kinematic Viscosity     | 36.6 +39.4°C   | 0.05           | Total           | 305          | 70C  | -   | Precision                  | 295 +405°C    | 0.5            | Total           | 379          |
| 28F  | 31F | Kinematic Viscosity     | 97.5 +102.5°F  | 0.1            | Total           | 305          | 70F  | -   | Precision                  | 563 +761°F    | 1              | Total           | 379          |
| 29C  | 34C | Kinematic Viscosity     | 52.6 +55.4°C   | 0.05           | Total           | 305          | 71C  | 72C | Oil in Wax                 | -37 +21°C     | 0.5            | 76              | 355          |
| 29F  | 34F | Kinematic Viscosity     | 127.5 +132.5°F | 0.1            | Total           | 305          | 71F  | 72F | Oil in Wax                 | -35 +70°F     | 1              | 76              | 355          |
| 30F  | 32F | Kinematic Viscosity     | 207.5 +212.5°F | 0.1            | Total           | 305          | 72C  | 67C | Kinematic Viscosity        | 19.4 -16.6°C  | 0.05           | Total           | 305          |
| 33C  | 20C | Low Aniline Point       | -38 +42°C      | 0.2            | 50              | 420          | 72F  | 67F | Kinematic Viscosity        | -2.5 +2.5°F   | 0.1            | Total           | 305          |
| 33F  | -   | Low Aniline Point       | 36.5 +107.5°   | 0.5            | 50              | 420          | 73C  | 68C | Kinematic Viscosity        | 41.4 -38.6°C  | 0.05           | Total           | 305          |
| 34C  | 21C | Medium Aniline Point    | 25 +105°C      | 0.2            | 50              | 420          | 73F  | 68F | Kinematic Viscosity        | 42.5 -37.5°F  | 0.1            | Total           | 305          |
| 34F  | -   | Medium Aniline Point    | 77 +221°F      | 0.5            | 50              | 420          | 74C  | 69C | Kinematic Viscosity        | 55.4 -52.6°C  | 0.05           | Total           | 305          |
| 35C  | 59C | High Aniline Point      | 90 +170°C      | 0.2            | 50              | 420          | 74F  | 69F | Kinematic Viscosity        | 67.5 -62.5°F  | 0.1            | Total           | 305          |
| 35F  | -   | High Aniline Point      | 194 +338°F     | 0.5            | 50              | 420          | 75F  | -   | Anti-freeze Freezing Point | -35 +35°F     | 0.5            | 100             | 408          |
| 36C  | -   | Titer Test              | -2 +68°C       | 0.2            | 45              | 405          | 76F  | -   | Anti-freeze Freezing Point | -65 +5°F      | 0.5            | 100             | 408          |
| 37C  | 77C | Solvents Distillation   | -2 +52°C       | 0.2            | 100             | 395          | 77F  | -   | Saybolt Viscosity          | 245 +265°F    | 0.5            | Total           | 275          |
| 38C  | 78C | Solvents Distillation   | 24 +78°C       | 0.2            | 100             | 395          | 78F  | -   | Saybolt Viscosity          | 295 +315°F    | 0.5            | Total           | 275          |
| 39C  | 79C | Solvents Distillation   | 48 +102°C      | 0.2            | 100             | 395          | 79F  | -   | Saybolt Viscosity          | 345 +365°F    | 0.5            | Total           | 275          |
| 40C  | 80C | Solvents Distillation   | 72 +126°C      | 0.2            | 100             | 395          | 80F  | -   | Saybolt Viscosity          | 395 +415°F    | 0.5            | Total           | 275          |
| 41C  | 81C | Solvents Distillation   | 98 +152°C      | 0.2            | 100             | 395          | 81F  | -   | Saybolt Viscosity          | 445 +465°F    | 0.5            | Total           | 275          |
| 42C  | 82C | Solvents Distillation   | 95 +255°C      | 0.5            | 100             | 395          | 82C  | -   | Fuel Rating. Engine        | -15 +105°C    | 1              | 30              | 162          |

| ASTM | IP  | Name                         | Range+T°       | Division<br>mm | Immersion<br>mm | Length<br>mm |
|------|-----|------------------------------|----------------|----------------|-----------------|--------------|
| 82F  | -   | Fuel Rating. Engine          | 0 +220°F       | 2              | 30              | 162          |
| 83C  | -   | Fuel Rating. Air             | 15 +70°C       | 1              | 40              | 171          |
| 83F  | -   | Fuel Rating. Air             | 60 +160°F      | 1              | 40              | 171          |
| 84C  | -   | Fuel Rating. Orifice Tank    | 25 +80°C       | 1              | 249             | 383          |
| 84F  | -   | Fuel Rating. Orifice Tank    | 75 +175°F      | 1              | 249             | 383          |
| 85C  | -   | Fuel Rating. Surge           | 40 +150°C      | 1              | 181             | 310          |
| 85F  | -   | Fuel Rating. Surge           | 100 +300°F     | 2              | 181             | 310          |
| 86C  | -   | Fuel Rating. Mix             | 95 +175°C      | 1              | 35              | 167          |
| 86F  | -   | Fuel Rating. Mix             | 200 +350°F     | 2              | 35              | 167          |
| 87C  | -   | Fuel Rating. Coolant         | 150 +205°C     | 1              | 40              | 172          |
| 87F  | -   | Fuel Rating. Coolant         | 300 +400°F     | 1              | 40              | 172          |
| 88C  | -   | Vegetable Oil Flash          | 10 +200°C      | 1              | 57              | 287          |
| 88F  | -   | Vegetable Oil Flash          | 50 +392°F      | 2              | 57              | 287          |
| 89C  | -   | Solidification Point         | -20 +10°C      | 0.1            | 76              | 370          |
| 90C  | -   | Solidification Point         | 0 +30°C        | 0.1            | 76              | 370          |
| 91C  | -   | Solidification Point         | 20 +50°C       | 0.1            | 76              | 370          |
| 92C  | -   | Solidification Point         | 40 +70°C       | 0.1            | 76              | 370          |
| 93C  | -   | Solidification Point         | 60 +90°C       | 0.1            | 76              | 370          |
| 94C  | -   | Solidification Point         | 80 +110°C      | 0.1            | 76              | 370          |
| 95C  | -   | Solidification Point         | 100 +130°C     | 0.1            | 76              | 370          |
| 96C  | -   | Solidification Point         | 120 +150°C     | 0.1            | 76              | 370          |
| 97C  | -   | Tank                         | -18 +49°C      | 0.5            | Total           | 305          |
| 97F  | -   | Tank                         | 0 +120°F       | 1              | Total           | 305          |
| 98C  | -   | Tank                         | 16 +82°C       | 0.5            | Total           | 305          |
| 98F  | -   | Tank                         | 60 +180°F      | 1              | Total           | 305          |
| 99C  | -   | Weathering Test              | -50 +5°C       | 0.2            | 35              | 302          |
| 99F  | -   | Weathering Test              | -55 +40°F      | 0.5            | 35              | 302          |
| 100C | -   | Solidification Point         | 145 +205°C     | 0.2            | 76              | 370          |
| 101C | -   | Solidification Point         | 195 +305°C     | 0.5            | 76              | 370          |
| 102C | 83C | Solvents Distillation        | 123 +177°C     | 0.2            | 100             | 395          |
| 103C | 84C | Solvents Distillation        | 148 +202°C     | 0.2            | 100             | 395          |
| 104C | 85C | Solvents Distillation        | 173 +227°C     | 0.2            | 100             | 395          |
| 105C | 86C | Solvents Distillation        | 198 +252°C     | 0.2            | 100             | 395          |
| 106C | 87C | Solvents Distillation        | 223 +277°C     | 0.2            | 100             | 395          |
| 107C | 88C | Solvents Distillation        | 248 +302°C     | 0.2            | 100             | 395          |
| 108F | -   | Saybolt Viscosity            | 270 +290°F     | 0.5            | Total           | 175          |
| 109F | -   | Saybolt Viscosity            | 320 +340°F     | 0.5            | Total           | 175          |
| 110C | 83C | Kinematic Viscosity          | 133.6 +136.4°C | 0.05           | Total           | 305          |
| 110F | -   | Kinematic Viscosity          | 272.5 +277.5°F | 0.1            | Total           | 305          |
| 111C | -   | Tar Acids Distillation       | 170 +250°C     | 0.2            | 100             | 395          |
| 112C | -   | of Benzene                   | 4 +6°C         | 0.02           | Total           | 215          |
| 112C | 89C | Softening Point Wide Range   | -1 +175°C      | 0.5            | Total           | 405          |
| 113F | 89F | Softening Point Wide Range   | 30 +350°F      | 1              | Total           | 405          |
| 114C | 14C | Aviation Fuel Freezing Point | -80 +20°C      | 0.5            | Total           | 300          |
| 116C | -   | Bomb Calorimeter             | 18.9 +25.1°C   | 0.01           | Total           | 609          |
| 117C | -   | Bomb Calorimeter             | 23.9 +30.1°C   | 0.01           | Total           | 609          |
| 118C | -   | Kinematic Viscosity          | 28.6 +31.4°C   | 0.05           | Total           | 305          |
| 118F | -   | Kinematic Viscosity          | 83.5 +88.5°F   | 0.1            | Total           | 305          |
| 119C | -   | Anti-Freeze Freezing Point   | 38.3 -30°C     | 0.1            | 100             | 420          |
| 119F | -   | Anti-Freeze Freezing Point   | -37 -22°F      | 0.2            | 100             | 420v         |
| 120C | 92C | Kinematic Viscosity          | 38.6 +41.4°C   | 0.05           | Total           | 305          |
| 121C | 32C | Kinematic Viscosity          | 98.6 +101.4°C  | 0.05           | Total           | 305          |
| 122C | 94C | Brookfield Viscosity         | -45 -35°C      | 0.1            | Total           | 305          |
| 123C | 95C | Brookfield Viscosity         | -35 -25°C      | 0.1            | Total           | 305          |
| 124C | 96C | Brookfield Viscosity         | -25 -15°C      | 0.1            | Total           | 305          |
| 125C | 97C | Brookfield Viscosity         | -15 -5°C       | 0.1            | Total           | 305          |
| 126C | 71C | Kinematic Viscosity          | 27.4 -24.6°C   | 0.05           | Total           | 305          |
| 126F | 71F | Kinematic Viscosity          | 17.5 -12.5°F   | 0.1            | Total           | 305          |
| 127C | 99C | Kinematic Viscosity          | 21.4 -18.6°C   | 0.05           | Total           | 305          |
| 128C | 33C | Kinematic Viscosity          | -1.4 +1.4°C    | 0.05           | Total           | 305          |
| 128F | 33F | Kinematic Viscosity          | 29.5 +34.5°F   | 0.1            | Total           | 305          |
| 129C | 36C | Kinematic Viscosity          | 91.6 +94.4°C   | 0.05           | Total           | 305          |
| 129F | 36F | Kinematic Viscosity          | 197.5 +202.5°F | 0.1            | Total           | 305          |