



**Marine**

**Gulf**  
**Marine**

**PRODUCT RANGE**

# MAIN LUBRICANTS

## GULF MARINE LUBRICANTS TYPICAL VALUES

### CYLINDER OILS

| LUBRICANTS               | SAE or ISO | BN  | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | APPROVED BY MAJOR ENGINE MANUFACTURERS | APPLICATION  |
|--------------------------|------------|-----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|--|
|                          |            |     | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |  |
| GulfSea Cylcare XP 5040  | 50         | 40  | 0.915          | 0.912 | 227.9                          | 20.5  | -33             | 266                  | Yes                                    | <b>Marine Cylinder Oil</b> specially designed to deliver outstanding dispersancy and detergency for the latest model of Low Speed 2-stroke Marine Diesel Engines using very low sulphur residual fuel blends (VLSFO). It meets the higher performance standards required of CAT II cylinder oils by MAN ES, particularly for piston cleanliness and deposit control                                    |
| GulfSea Cylcare 5040     | 50         | 40  | 0.916          | 0.913 | 217.0                          | 19.9  | -18             | 274                  | Yes                                    | <b>Marine Cylinder Oil</b> specially formulated for modern Low Speed 2-Stroke Marine Engine using low sulphur residual fuel blends and distillates.  |
| GulfSea Cylcare 5070     | 50         | 70  | 0.934          | 0.931 | 215.1                          | 19.9  | -18             | 246                  | Yes                                    | <b>Marine Cylinder Oil</b> specially designed for modern Low Speed 2-stroke Marine Main Engines using Heavy Fuel Oil (HFO)   |
| GulfSea Cylcare XP 50100 | 50         | 100 | 0.954          | 0.951 | 195.3                          | 19.3  | -9              | 250                  | Yes                                    | <b>Marine Cylinder Oil</b> specially designed for the latest range of modern Low Speed 2-stroke Marine Diesel Engines using High Sulphur Heavy Fuel Oil (HFO). It meets the higher performance standards required of CAT II cylinder oils by MAN ES, particularly for piston cleanliness and deposit control.  |
| GulfSea Cylcare XP 50140 | 50         | 140 | 0.970          | 0.967 | 186.6                          | 19.7  | -9              | 236                  | Yes                                    | <b>Ultra High BN Marine Cylinder Oil</b> specially designed for coping with high operational demands and optimising cylinder oil feed rates in latest range of modern Low Speed 2-stroke Marine Diesel Engines using High Sulphur Heavy Fuel Oil (HFO). It meets the higher performance standards required of CAT II cylinder oils by MAN ES, particularly for piston cleanliness and deposit control. |

### SYSTEM OILS

| LUBRICANTS             | SAE or ISO | BN  | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | APPROVED BY MAJOR ENGINE MANUFACTURERS | APPLICATION   |
|------------------------|------------|-----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|---|
|                        |            |     | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |   |
| GulfSea SuperBear 3006 | 30         | 5-6 | 0.893          | 0.890 | 99.4                           | 11.1  | -18             | 220                  | Yes                                    | <b>Low Speed 2 Stroke Engine System Oil</b> specifically designed for modern Marine Propulsion Engines. |

### TRUNK PISTON ENGINE OILS

| LUBRICANTS         | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | APPROVED BY MAJOR ENGINE MANUFACTURERS | APPLICATION   |
|--------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|---|
|                    |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |   |
| GulfSea Power 3030 | 30         | 30 | 0.899          | 0.896 | 94.9                           | 11.1  | -18             | >215                 | Yes                                    | <b>Marine Trunk Piston Engine Oil</b> specially designed for modern Medium Speed 4-stroke Marine Engines running Heavy Fuel Oil (HFO) |
| GulfSea Power 3040 | 30         | 40 | 0.905          | 0.902 | 93.5                           | 11.1  | -18             | >215                 | Yes                                    |   |
| GulfSea Power 3055 | 30         | 55 | 0.913          | 0.910 | 91.5                           | 11.1  | -18             | >215                 | Yes                                    |   |
| GulfSea Power 4030 | 40         | 30 | 0.905          | 0.902 | 143.2                          | 14.5  | -18             | >215                 | Yes                                    |   |
| GulfSea Power 4040 | 40         | 40 | 0.910          | 0.907 | 141.9                          | 14.5  | -18             | >215                 | Yes                                    |   |
| GulfSea Power 4055 | 40         | 55 | 0.918          | 0.915 | 137.3                          | 14.5  | -18             | >215                 | Yes                                    |   |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.

## TRUNK PISTON ENGINE OILS (CONTINUED)

| LUBRICANTS             | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | APPROVED BY MAJOR ENGINE MANUFACTURERS | APPLICATION   |
|------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|---|
|                        |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |   |
| GulfSea Power MDO 3012 | 30         | 12 | 0.889          | 0.886 | 95.3                           | 10.9  | -18             | >215                 | Yes                                    | Trunk piston engine oil for medium speed diesel engines operating on distillate fuel, Very Low Sulphur Fuel (VLSFO) <0.5% Sulphur Content and Ultra Low Sulphur Fuel (ULSFO) <0.1% Sulphur Content. |
| GulfSea Power MDO 3015 | 30         | 15 | 0.891          | 0.888 | 97.8                           | 11.1  | -18             | >215                 | Yes                                    |   |
| GulfSea Power MDO 3020 | 30         | 20 | 0.894          | 0.891 | 97.0                           | 11.1  | -18             | >215                 | Yes                                    |   |
| GulfSea Power MDO 4012 | 40         | 12 | 0.896          | 0.893 | 145.9                          | 14.5  | -18             | >215                 | Yes                                    |   |
| GulfSea Power MDO 4015 | 40         | 15 | 0.897          | 0.894 | 143.0                          | 14.3  | -18             | >215                 | Yes                                    |   |
| GulfSea Power MDO 4020 | 40         | 20 | 0.900          | 0.897 | 145.9                          | 14.5  | -18             | >215                 | Yes                                    |   |

## GAS ENGINE OILS

| LUBRICANTS       | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | APPROVED BY MAJOR ENGINE MANUFACTURERS | APPLICATION  |
|------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|--|
|                  |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |  |
| GulfSea Power LA | 40         | 5  | 0.881          | 0.878 | 124.8                          | 13.6  | -16             | 220                  | Yes                                    | Premium Quality Heavy-Duty Gas Engine Oil intended for lubrication of high-performance gas engines requiring a "low ash" oil. (Sulphated Ash: 0.5 wt%) |

# AUXILIARY LUBRICANTS

## GULF MARINE LUBRICANTS TYPICAL VALUES

### ENGINE OILS

| LUBRICANTS                     | SAE or ISO | BN   | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)  | APPLICATION  |
|--------------------------------|------------|------|----------------|-------|--------------------------------|-------|-----------------|----------------------|---|--|
|                                |            |      | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |   |  |
| GulfSea Power MX 15W-40        | 15W-40     | 10.0 | 0.875          | 0.872 | 115.6                          | 15.2  | -39             | 236                  | API CI-4, MTU Type 2, Caterpillar ECF-2/ECF-1A, Cummins CES 20078, MAN M3275-1, Volvo VDS-3 | Premium Quality Marine Engine Oil  |
| GulfSea Powerfleet 10W-30      | 10W-30     | 10.3 | 0.873          | 0.870 | 78.5                           | 11.8  | -36             | 212                  | API CI-4, Caterpillar ECF-1a, Cummins CES 20077, 20078, MTU Type 2                          | Multigrade Marine Oil specially formulated for highly turbo-charged diesel engines.  |
| GulfSea Powerfleet Plus 10W-40 | 10W-40     | 10.6 | 0.887          | 0.884 | 95.8                           | 14.4  | -39             | 228                  | API CI-4, ACEA E7, Cummins 20077, 20078, MTU Type 2, Caterpillar ECF-1a                     |  |
| GulfSea Power MX Plus 15W-40   | 15W-40     | 9.0  | 0.877          | 0.874 | 118.0                          | 15.2  | -42             | 228                  | API CJ-4, MTU Type 2.1, Caterpillar ECF-1a, ECF-2 and ECF-3.                                | Superior Quality Marine Engine Oil   |
| GulfSea Diesel DD 30           | 30         | 7.4  | 0.890          | 0.887 | 99.3                           | 11.2  | -15             | 236                  | API CF/CF-2   | Premium Quality Monograde Engine Oil developed for high output, high speed two-cycle marine diesel engines.  |
| GulfSea Diesel DD 40           | 40         | 7.4  | 0.890          | 0.887 | 143.4                          | 14.2  | -12             | 242                  |   |  |
| GulfSea Diesel GE 40           | 40         | 13.2 | 0.889          | 0.886 | 154.2                          | 15.1  | -18             | 246                  | API CF/CF-2, LMOA Generation 5, EMD of General Motors, GE as Generation 4 Long Life Oils    | High Performance, Zinc-free and Chlorine-free Oil specially designed to provide excellent engine cleanliness and oil filter life in the modern railroad diesel locomotive engines. |
| GulfSea Diesel GF 40           | 40         | 17.3 | 0.903          | 0.887 | 149.6                          | 15.0  | -18             | 246                  |   |  |
| GulfSea Outboard 3             | -          | 3.4  | 0.867          | 0.864 | 45.6                           | 7.5   | -33             | 96                   | NMMA TC-W3  | High Performance, Ashless, 2-Cycle Engine Oil developed to meet the most critical requirements of modern water cooled outboard engines.  |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.

## HYDRAULIC OILS

| LUBRICANTS                     | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT GOC (°C) | MEET THE SPECIFICATION (S)   | APPLICATION  |
|--------------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|--|
|                                |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |  |
| GulfSea Hydraulic SHVI 15      | 15         | -  | 0.873          | 0.870 | 15.6                           | 5.7   | -63             | 96                   | -  | <b>Marine Super High Viscosity Index Hydraulic Oil</b> specially formulated for lubrication of hydraulic and power transmission systems when an "ultra clean" fluid is required or in extreme low temperature environment. |
| GulfSea Hydraulic HVI Plus 15  | 15         | -  | 0.855          | 0.852 | 14.9                           | 3.8   | -42             | 180                  | DIN 51524 Part 3 HVL, ASTM D 6158 (HV), ISO 11158 HV, Eaton E-FDGN-TB002-E, GB 11118.1-2011 (L-HV), SAE MS 1004 (HV)   |  |
| GulfSea Hydraulic HVI Plus 22  | 22         | -  | 0.857          | 0.854 | 22.5                           | 4.9   | -42             | 192                  | DIN 51524 Part 3 HVL, ASTM D 6158 (HV), ISO 11158 HV, Eaton E-FDGN-TB002-E, GB 11118.1-2011 (L-HV), SAE MS 1004 (HV), SEB 181222   |  |
| GulfSea Hydraulic HVI Plus 32  | 32         | -  | 0.861          | 0.858 | 32.2                           | 6.2   | -39             | 219                  | DIN 51524 Part 3 HVL, ASTM D 6158 (HV), ISO 11158 HV, Eaton E-FDGN-TB002-E, GB 11118.1-2011 (L-HV), SAE MS 1004 (HV), Parker (formerly Denison) HF-0, HF-1, HF-2, Bosch Rexroth RDE 90235, JCMAS P041 HK, Fives CINCINNATI, SEB 181222 |  |
| GulfSea Hydraulic HVI Plus 46  | 46         | -  | 0.855          | 0.852 | 46.9                           | 8.1   | -33             | 222                  |  |  |
| GulfSea Hydraulic HVI Plus 68  | 68         | -  | 0.858          | 0.855 | 68.9                           | 10.9  | -30             | 232                  |  |  |
| GulfSea Hydraulic HVI Plus 100 | 100        | -  | 0.861          | 0.858 | 98.6                           | 14.1  | -27             | 242                  |  |  |
| GulfSea Hydraulic HVI Plus 150 | 150        | -  | 0.862          | 0.859 | 147.2                          | 19.5  | -30             | 248                  |  |  |

**Marine Anti-wear Hydraulic Oil** specially formulated for lubrication of all hydraulic equipments operating in extreme temperature conditions.

## EAL HYDRAULIC OILS

| LUBRICANTS                   | SAE or ISO | BN | DENSITY (kg/l) |      | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT GOC (°C) | MEET THE SPECIFICATION (S) | APPLICATION   |
|------------------------------|------------|----|----------------|------|--------------------------------|-------|-----------------|----------------------|----------------------------|---|
|                              |            |    | 15°C           | 20°C | 40°C                           | 100°C |                 |                      |                            |   |
| GulfSea BD Hydraulic Oil 32  | 32         | -  | 0.875          | -    | 32                             | -     | -51             | >175                 | ISO 15380                  | <b>GulfSea BD Hydraulic Oils</b> are a range of VGP compliant, biodegradable, high performance hydraulic fluids. Ester based, these fluids are zinc free and exhibit high antiwear performance. |
| GulfSea BD Hydraulic Oil 46  | 46         | -  | 0.882          | -    | 46                             | -     | -48             | >185                 |                            |   |
| GulfSea BD Hydraulic Oil 68  | 68         | -  | 0.886          | -    | 68                             | -     | -48             | >195                 |                            |   |
| GulfSea BD Hydraulic Oil 100 | 100        | -  | 0.890          | -    | 100                            | -     | -48             | >205                 |                            |   |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.

## EAL STERNTUBE OILS

| LUBRICANTS                   | SAE or ISO | BN | DENSITY (kg/l) |      | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S) | APPLICATION  |
|------------------------------|------------|----|----------------|------|--------------------------------|-------|-----------------|----------------------|----------------------------|--|
|                              |            |    | 15°C           | 20°C | 40°C                           | 100°C |                 |                      |                            |  |
| GulfSea BD Sterntube Oil 68  | 68         | -  | 0.92           | -    | 68                             | -     | <-24            | >170                 | -                          | GulfSea BD Sterntube Oils are VGP compliant, biodegradable lubricants developed for use in sterntube applications. |
| GulfSea BD Sterntube Oil 100 | 100        | -  | 0.92           | -    | 100                            | -     | <-24            | >170                 |                            |  |
| GulfSea BD Sterntube Oil 220 | 220        | -  | 0.93           | -    | 220                            | -     | <-12            | >170                 |                            |  |

## GEAR OILS

| LUBRICANTS           | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)   | APPLICATION   |
|----------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|---|
|                      |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |   |
| GulfSea Gear Oil 68  | 68         | -  | 0.884          | 0.881 | 68.2                           | 8.7   | -15             | 224                  | DIN 51517 Part 3, ISO 12925-1 Type CKC, AGMA 9005 E-02, David Brown S1.53 101(E) and AIST (US Steel) 224 | Marine Gear Oil with Sulphur-phosphorous additives specially formulated for all Types of gears and bearings in extreme pressure conditions. |
| GulfSea Gear Oil 100 | 100        | -  | 0.889          | 0.886 | 100.2                          | 11.2  | -15             | 230                  |  |   |
| GulfSea Gear Oil 150 | 150        | -  | 0.893          | 0.890 | 148.7                          | 14.6  | -12             | 240                  |  |   |
| GulfSea Gear Oil 220 | 220        | -  | 0.897          | 0.894 | 218.8                          | 18.8  | -12             | 242                  |  |   |
| GulfSea Gear Oil 320 | 320        | -  | 0.901          | 0.898 | 315.7                          | 23.8  | -12             | 246                  |  |   |
| GulfSea Gear Oil 460 | 460        | -  | 0.905          | 0.902 | 461.3                          | 28.4  | -9              | 252                  |  |   |
| GulfSea Gear Oil 680 | 680        | -  | 0.907          | 0.904 | 682.4                          | 37.7  | -6              | 256                  |  |   |

## SYNTHETIC GEAR OILS

| LUBRICANTS                    | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)  | APPLICATION   |
|-------------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|---|---|
|                               |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |   |   |
| GulfSea Synth Gear Oil 150    | 150        | -  | 0.851          | 0.848 | 150.5                          | 20.2  | -39             | 272                  | AIST (US Steel) 224, AGMA 9005-E02, DIN 51517 Part 3, ISO 6743-6 Category CKD, Cincinnati Milacron, David Brown | Marine Synthetic Gear Oil specially formulated for all Types of gears and bearings with higher oxidation resistance, hydrolysis resistance and anti-rusting properties. |
| GulfSea Synth Gear Oil 220    | 220        | -  | 0.846          | 0.843 | 217.6                          | 26.9  | -39             | 290                  |   |   |
| GulfSea Synth Gear Oil 320    | 320        | -  | 0.848          | 0.845 | 320.8                          | 36.4  | -36             | 294                  |   |   |
| GulfSea Synth Gear Oil PG 220 | 220        | -  | 1.001          | 0.998 | 234                            | 38    | -32             | 260                  | AIST (US Steel) 224, AGMA 9005-E02, DIN 51517 Part 3, CLP, David Brown  | Marine Synthetic Gear Oil particularly suitable for all Types of gears and bearings at high temperatures and heavy shock loads.   |

## EAL GEAR OILS

| LUBRICANTS              | SAE or ISO | BN | DENSITY (kg/l) |      | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)          | APPLICATION  |
|-------------------------|------------|----|----------------|------|--------------------------------|-------|-----------------|----------------------|-------------------------------------|--|
|                         |            |    | 15°C           | 20°C | 40°C                           | 100°C |                 |                      |                                     |  |
| GulfSea BD Gear Oil 68  | 68         | -  | 0.91           | -    | 68                             | -     | <-30            | >200                 | DIN 51517-3 CLP and ISO 12925-1 CKD | GulfSea BD Gear Oils are VGP compliant, high performance EP biodegradable gear oils. They exhibit high anti-wear and micro-pitting properties. |
| GulfSea BD Gear Oil 100 | 100        | -  | 0.92           | -    | 100                            | -     | <-30            | >200                 |                                     |  |
| GulfSea BD Gear Oil 150 | 150        | -  | 0.93           | -    | 150                            | -     | <-30            | >200                 |                                     |  |

## REFRIGERATING OIL

| LUBRICANTS           | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S) | APPLICATION  |
|----------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|----------------------------|--|
|                      |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |                            |  |
| GulfSea N Cooloil 68 | 68         | -  | 0.916          | 0.914 | 61.4                           | 6.55  | -36             | 185                  | DIN 51503 KAA, KC and KE   | Marine Refrigerating Oil specially formulated for all Types of refrigerating compressors using refrigerants like HCFC, ammonia and CO <sub>2</sub> . |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.

## SYNTHETIC REFRIGERATING OILS

| LUBRICANTS             | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)   | APPLICATION  |
|------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|--|
|                        |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |  |
| GulfSea AB Cooloil 55  | -          | -  | 0.87           | 0.866 | 53.0                           | 6.2   | -45             | 185                  | DIN 51503 KC   | <b>Marine Synthetic Reciprocating Air Compressor &amp; Refrigeration Compressor Oil</b> specially formulated for extreme thermal conditions and for refrigerants R22, R114 or similar. |
| GulfSea PE Cooloil 32  | 32         | -  | 0.984          | 0.980 | 32.0                           | 5.6   | -55             | >240                 | DIN 51503 KD   |  |
| GulfSea PE Cooloil 46  | 46         | -  | 0.974          | 0.969 | 46.1                           | 6.9   | -47             | >240                 |  |  |
| GulfSea PE Cooloil 68  | 68         | -  | 0.966          | 0.964 | 65.0                           | 8.3   | -40             | >240                 |  |  |
| GulfSea PE Cooloil 100 | 100        | -  | 0.966          | 0.964 | 100.0                          | 10.9  | -35             | >240                 |  |  |
| GulfSea PE Cooloil 170 | 170        | -  | 0.969          | 0.965 | 167.8                          | 15.3  | -31             | >240                 |  |  |
| GulfSea PE Cooloil 220 | 220        | -  | 0.966          | 0.960 | 217.0                          | 17.9  | -30             | >240                 | <b>Marine Synthetic Polyolester Oil</b> specially formulated for refrigerating compressors using HFC refrigerants. |  |

## COMPRESSOR OILS

| LUBRICANTS                 | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)                     | APPLICATION  |
|----------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|--|
|                            |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |  |
| GulfSea Compressor Oil 100 | 100        | -  | 0.861          | 0.858 | 99.8                           | 11.5  | -12             | 228                  | DIN 51506 VDL, ISO 6743-3:2003 DAA Normal Duty | <b>Marine Air Compressor Oil</b> specially formulated for all rotary/reciprocating air compressors |
| GulfSea Compressor Oil 150 | 150        | -  | 0.887          | 0.884 | 154.8                          | 15.01 | -9              | 274                  |  |  |

## SYNTHETIC AIR COMPRESSOR OILS

| LUBRICANTS                       | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)          | APPLICATION   |
|----------------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|-------------------------------------|---|
|                                  |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |                                     |   |
| GulfSea Synth Compressor Oil 46  | 46         | -  | 0.833          | 0.831 | 44.1                           | 7.8   | -42             | 270                  | ISO 6743-3 ISO-L-DAJ, DIN 51506 VDL | <b>Marine Synthetic Compressor Lubricant</b> specially formulated for turbochargers and compressors which extreme anti-oxidation properties.  |
| GulfSea Synth Compressor Oil 68  | 68         | -  | 0.836          | 0.833 | 64.9                           | 10.4  | -42             | 270                  |                                     |   |
| GulfSea DE Compressor Oil 100    | 100        | -  | 0.959          | 0.956 | 93.5                           | 9.16  | -34             | 262                  | DIN 51506 VDL                       | <b>Marine Synthetic Air Compressor Oil</b> with synthetic ester based fluid specially formulated for reciprocating air compressors, heavy duty turbochargers and vacuum pumps in extreme high temperature conditions and anti-corrosive properties. |
| GulfSea DE Compressor Oil 150    | 150        | -  | 0.956          | 0.952 | 152                            | 12.62 | -33             | 290                  |                                     |   |
| GulfSea Synth LPG Compressor Oil | 150        | -  | 1.050          | 1.046 | 161.3                          | 29.9  | -37             | 248                  | ISO 6743-3B DGC & DGE               | <b>Marine Synthetic Compressor Lubricant</b> specially formulated for hydrocarbon and natural gas compressors   |

## TURBINE OILS

| LUBRICANTS              | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)  | APPLICATION   |
|-------------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|---|---|
|                         |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |   |   |
| GulfSea Turbine Oil 32  | 32         | -  | 0.852          | 0.849 | 32.2                           | 5.5   | -24             | 212                  | ASTM D 4304, BS 489, DIN 51515 Part 1 (TD) and Part 2 (TG), Siemens TLV 9013-04, SOLAR ES 9-224W Class II | <b>Marine Turbine Oil</b> specially formulated for turbo generators, turbochargers and turbo pumps. |
| GulfSea Turbine Oil 46  | 46         | -  | 0.855          | 0.852 | 46.3                           | 6.9   | -21             | 220                  |   |   |
| GulfSea Turbine Oil 68  | 68         | -  | 0.858          | 0.855 | 68.3                           | 8.9   | -15             | 222                  |   |   |
| GulfSea Turbine Oil 100 | 100        | -  | 0.862          | 0.859 | 100.5                          | 11.3  | -15             | 224                  | ASTM D 4304, BS 489   |   |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.

## TRANSMISSION & GEAR OILS

| LUBRICANTS            | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S)   | APPLICATION   |
|-----------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|--|---|
|                       |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |  |   |
| GulfSea ATF III       | -          | -  | 0.827          | 0.825 | 41.0                           | 7.9   | -40             | 184                  | General Motors Dexron IIG <sup>*1</sup> , Ford MERCON <sup>®*</sup>  | High performance Automatic Transmission Fluid   |
| GulfSea UTTO 80W      | 80W        | -  | 0.886          | 0.883 | 58.0                           | 9.6   | -39             | 204                  | API GL-4, Eaton Vickers 35VQ25, ALLISON C-4, Caterpillar TO-2, Massey Ferguson M1135, M1145, M1143, John Deere J 20C | High Performance Universal Tractor Transmission Fluid   |
| GulfSea Gear B 80W-90 | 80W-90     | -  | 0.891          | 0.888 | 149.6                          | 15.0  | -30             | 210                  | API GL-5, MIL-L-2105D, MAN 342 Typ M-2, ZF TE-ML-05A, 16B, 17B, 19B, 21A   | High Performance Gear Lubricant for use in heavy duty manual transmissions and axle drives of commercial vehicles and passenger cars. |

\* Obsolete specification

## HEAT TRANSFER OIL

| LUBRICANTS        | SAE or ISO | BN | DENSITY (kg/l) |       | VISCOSITY (mm <sup>2</sup> /s) |       | POUR POINT (°C) | FLASH POINT COC (°C) | MEET THE SPECIFICATION (S) | APPLICATION   |
|-------------------|------------|----|----------------|-------|--------------------------------|-------|-----------------|----------------------|----------------------------|---|
|                   |            |    | 15°C           | 20°C  | 40°C                           | 100°C |                 |                      |                            |   |
| GulfSea HT Oil 32 | 32         | -  | 0.868          | 0.865 | 32.2                           | 5.4   | -12             | 230                  | -                          | Marine Heat Transfer Mineral Oil with high oxidation resistance specially formulated for fired and unfired Heat Transfer systems. |

## GREASES

| LUBRICANTS                | NLGI GRADE | THICKENER                 | TEMPERATURE RANGE (°C) | DROP POINT (°C) | WORKED PENETRATION AT 25°C | MEET THE SPECIFICATION (S)             | APPLICATION   |
|---------------------------|------------|---------------------------|------------------------|-----------------|----------------------------|--|---|
| GulfSea Hyperbar Super CS | 0/1        | Calcium Sulfonate Complex | -25 - 150              | 264             | 330-360                    | DIN 51825 KP0/1N-25; DIN 51826 KP      | Marine Extreme Pressure, Water Resistant, High Temperature Calcium Sulfonate Complex Grease specially formulated for wire ropes and open gears.   |
| GulfSea Hyperbar CS 2     | 2          | Calcium Sulfonate Complex | -20 -180               | 333             | 265-295                    | DIN 51825 KP2R-20                      | Marine Extreme Pressure, Water Resistant, High Temperature Calcium Sulfonate Complex Grease specially formulated for onboard multi-purpose use.   |
| GulfSea Hyperbar LC 3     | 3          | Lithium Complex           | -30 -160               | 287             | 220-250                    | ISO 6743/9 L-XCEEB3, DIN 51825 KP3P-30 | Marine High Temperature, High Speed Lithium Complex Grease specially formulated for electric motor bearings   |
| GulfSea Hyperbar LCM 2    | 2          | Lithium/ Calcium          | -20 -120               | 195             | 265-295                    | DIN 51825 KPF2N-20                     | Marine Extreme Pressure, Long Life Lithium/ Calcium Grease with Molybdenum disulfide specially formulated for general machinery or bearings which under heavy pressure and require excellent protection against rust and corrosion. |

## EAL GREASES

| LUBRICANTS            | NLGI GRADE | THICKENER        | TEMPERATURE RANGE (°C) | DROP POINT (°C) | WORKED PENETRATION AT 25°C | MEET THE SPECIFICATION (S) | APPLICATION  |
|-----------------------|------------|------------------|------------------------|-----------------|----------------------------|----------------------------|--|
| GulfSea BD EP0 Grease | 0          | Lithium/ Calcium | -25 - 140              | >170            | 355-385                    | DIN 51502 KPE0N-25         | GulfSea BD EP0 Grease is a VGP compliant, <b>Biodegradable EP0 Lithium/Calcium Grease</b> . It exhibits high load carrying properties and can be used wherever an NLGI 0 grease is required. |
| GulfSea BD EP2 Grease | 2          | Lithium/ Calcium | -25 - 125              | >175            | 265-295                    | DIN 51502 KPE2K-25         | <b>GulfSea BD EP2 Grease</b> is a VGP compliant, biodegradable EP2 Lithium/Calcium grease. It exhibits high load carrying properties and can be used wherever an NLGI 2 grease is required.  |

Note: The reference density for volume conversion for invoicing purposes is 15°C for bulk deliveries and 20°C for all packed deliveries.



always at the ship's side

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