

# Tankfarms Pre\_Season Winter Season 2023/2024

(NICE FRA Laboratory Test Results)



Aircraft Services & Support GmbH

Method: Brookfield; Spindle LV2; 0,3 rpm; 10 min; 20°C;250ml

Type IV: AMS 1428

Type IV Kilfrost ABC-S Plus Limits:

|                   | R/I min. | R/I max. | pH min. | pH max. | Visc. min. | Visc. max. |        |
|-------------------|----------|----------|---------|---------|------------|------------|--------|
| Type IV: AMS 1428 | 100%     | 1,3900   | 1,3930  | 6,0     | 8,0        | 17.900     | 44.000 |
| Type I: AMS 1424  | 100%     | 1,4175   | 1,4205  | 7,0     | 10,0       | n/a        | n/a    |

Source: Kilfrost ABC-S Plus, Technical Data sheet, July 2023

Source: Kilfrost DF Plus, Technical Data sheet, July 2023

| Tankfarm         | TA 1 Tank 1         | TA 1 Tank 2 | TA 1 Tank 3 | TA 1 Tank 4 | TA 1 Tank 11 | TA 1 Tank 12 | TA 1 Tank 1 | TA 1 Tank 2 | TA 1 Tank 3 | TA 1 Tank 4 | TA 1 Tank 5 | TA 1 Tank 6 | TA 1 Tank 7 | TA 1 Tank 8 | TA 1 Tank 11 | TA 1 Tank 12 |
|------------------|---------------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Tank             | Typ I               | Typ I       | Typ I       | Typ I       | Typ I        | Typ I        | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV       | Typ IV       |
| Fluid type       | Kilfrost ABC-S Plus |             |             |             |              |              |             |             |             |             |             |             |             |             |              |              |
| Fluid producer   | Kilfrost DF Plus    |             |             |             |              |              |             |             |             |             |             |             |             |             |              |              |
| Sampling Date    | 31.08.23            | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23     | 31.08.23     | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23    | 31.08.23     | 31.08.23     |
| Date of Analysis | 01.09.23            | 01.09.23    | 01.09.23    | 01.09.23    | 01.09.23     | 01.09.23     | 01.09.23    | 01.09.23    | 01.09.23    | 04.09.23    | 01.09.23    | 01.09.23    | 04.09.23    | 01.09.23    | 01.09.23     | 04.09.23     |
| Appearance       | clear               | clear       | clear       | clear       | clear        | clear        | clear       | clear       | clear       | clear       | clear       | clear       | clear       | clear       | clear        | clear        |
| Refractive Index | 1,4202              | 1,4200      | 1,4198      | 1,4195      | 1,4183       | 1,4188       | 1,3919      | 1,3918      | 1,3918      | 1,3922      | 1,3923      | 1,3918      | 1,3921      | 1,3920      | 1,3918       | 1,3918       |
| pH Value         | 8,74                | 8,00        | 8,91        | 8,96        | 8,98         | 9,01         | 6,83        | 6,93        | 6,76        | 6,89        | 6,87        | 6,90        | 6,90        | 6,71        | 6,86         | 6,93         |
| Viscosity        | n/a                 | n/a         | n/a         | n/a         | n/a          | n/a          | 23.900      | 26.100      | 26.100      | 32.500      | 31.700      | 30.500      | 35.400      | 29.800      | 26.900       | 28.200       |
| Temperature      | 20° C               | 20° C       | 20° C       | 20° C       | 20° C        | 20° C        | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C        | 20° C        |
| Status           | ok                  | ok          | ok          | ok          | ok           | ok           | ok          | ok          | ok          | ok          | ok          | ok          | ok          | ok          | ok           | ok           |

| Tankfarm         | TA 2 Tank 1         | TA 2 Tank 2 | TA 2 Tank 3 | TA 2 Tank 4 | TA 2 Tank 1 | TA 2 Tank 2 | TA 2 Tank 3 | TA 2 Tank 4 | TA 2 Tank 5 | TA 2 Tank 6 |
|------------------|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tank             | Typ I               | Typ I       | Typ I       | Typ I       | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV      |
| Fluid type       | Kilfrost ABC-S Plus |             |             |             |             |             |             |             |             |             |
| Fluid producer   | Kilfrost DF Plus    |             |             |             |             |             |             |             |             |             |
| Sampling Date    | 07.09.23            | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    |
| Date of Analysis | 07.09.23            | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    | 07.09.23    |
| Appearance       | clear               | clear       | clear       | clear       | clear       | clear       | clear       | clear       | clear       | clear       |
| Refractive Index | 1,4190              | 1,4189      | 1,4190      | 1,4189      | 1,3918      | 1,3917      | 1,3917      | 1,3920      | 1,3918      | 1,3918      |
| pH Value         | 8,86                | 8,90        | 8,97        | 8,99        | 6,91        | 6,93        | 6,92        | 6,94        | 6,90        | 6,92        |
| Viscosity        | n/a                 | n/a         | n/a         | n/a         | 20.200      | 30.200      | 26.600      | 27.200      | 25.800      | 26.800      |
| Temperature      | 20° C               | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       | 20° C       |
| Status           | ok                  | ok          | ok          | ok          | ok          | ok          | ok          | ok          | ok          | ok          |

| Tankfarm         | TA 3 Tank 1         | TA 3 Tank 2 | TA 3 Tank 3 | TA 3 Tank 11 | TA 3 Tank 12 | TA 3 Tank 13 | TA 3 Tank 14 | TA 3 Tank 1 | TA 3 Tank 2 | TA 3 Tank 3 | TA 3 Tank 4 | TA 3 Tank 11 | TA 3 Tank 12 | TA 3 Tank 13 | TA 3 Tank 14 | TA 3 Tank 15 | TA 3 Tank 16 | TA 3 Tank 17 | TA 3 Tank 18 |
|------------------|---------------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Tank             | Typ I               | Typ I       | Typ I       | Typ I        | Typ I        | Typ I        | Typ I        | Typ IV      | Typ IV      | Typ IV      | Typ IV      | Typ IV       | Typ IV       | Typ IV       | Typ IV       | Typ IV       | Typ IV       | Typ IV       | Typ IV       |
| Fluid type       | Kilfrost ABC-S Plus |             |             |              |              |              |              |             |             |             |             |              |              |              |              |              |              |              |              |
| Fluid producer   | Kilfrost DF Plus    |             |             |              |              |              |              |             |             |             |             |              |              |              |              |              |              |              |              |
| Sampling Date    | 15.09.23            | 15.09.23    | 15.09.23    | 15.09.23     | 15.09.23     | 15.09.23     | 15.09.23     | 15.09.23    | 15.09.23    | 15.09.23    | 15.09.23    | 15.09.23     | 15.09.23     | 15.09.23     | 15.09.23     | n/a          | n/a          | n/a          | 15.09.23     |
| Date of Analysis | 18.09.23            | 18.09.23    | 18.09.23    | 18.09.23     | 18.09.23     | 18.09.23     | 18.09.23     | 18.09.23    | 18.09.23    | 18.09.23    | 18.09.23    | 18.09.23     | 18.09.23     | 18.09.23     | 18.09.23     | 18.09.23     | 18.09.23     | n/a          | 18.09.23     |
| Appearance       | clear               | clear       | clear       | clear        | clear        | clear        | clear        | clear       | clear       | clear       | clear       | clear        | clear        | clear        | clear        | clear        | clear        | clear        | clear        |
| Refractive Index | 1,4183              | 1,4188      | 1,4188      | 1,4181       | 1,4188       | 1,4188       | 1,4189       | 1,3921      | 1,3921      | 1,3921      | 1,3916      | 1,3922       | 1,3921       | 1,3920       | 1,3919       | 1,3918       | 1,3916       | 0,0000       | 1,3916       |
| pH Value         | 8,78                | 8,87        | 9,04        | 7,91         | 9,01         | 9,08         | 9,13         | 6,86        | 6,90        | 7,00        | 6,98        | 6,83         | 6,92         | 6,83         | 6,87         | 6,87         | 6,88         | 0,00         | 6,91         |
| Viscosity        | n/a                 | n/a         | n/a         | n/a          | n/a          | n/a          | n/a          | 27.200      | 28.400      | 30.500      | 28.800      | 25.800       | 29.000       | 27.500       | 28.500       | 29.200       | 28.700       | 0            | 26.500       |
| Temperature      | 20° C               | 20° C       | 20° C       | 20° C        | 20° C        | 20° C        | 20° C        | 20° C       | 20° C       | 20° C       | 20° C       | 20° C        | 20° C        | 20° C        | 20° C        | 20° C        | 20° C        | 20° C        | 20° C        |
| Status           | ok                  | ok          | ok          | ok           | ok           | ok           | ok           | ok          | ok          | ok          | ok          | ok           | ok           | ok           | ok           | ok           | ok           | ok           | ok           |

<sup>1</sup>Emergency Reserve due to forecasted freezing rain on 19th December 2022, will be mixed with Kilfrost DF Plus as specified and approved by Kilfrost.