



BULLETIN #1026-1

# TECHNICAL BULLETIN

## Foam Compatibility — FIRE-BRAKE & BUSHMASTER


### *Introduction*

This study was undertaken to determine if SOLBERG® FIRE-BRAKE™ Class A foam concentrate is compatible with Nowa Australia Pty Ltd. BUSHMASTER “A” Class foam concentrate. Since the U.S. Forest Service Approval for Class A Foam Concentrates does not include any type of compatibility testing protocol, the compatibility test protocol for the U.S. Military specification for AFFF, Mil-F-24385F, was followed. In this specification, mixtures of the two concentrates are prepared at various ratios. These mixtures are tested for foam quality immediately after being prepared and again after being subjected to storage at 50 °C in tightly closed containers for a period of 10 days. In addition to the foam quality testing, the samples are visually inspected for any signs of incompatibility such as precipitation, haziness, gelling, layering, etc.

### *Sample Preparation*

Production lot number 3 NOV 14 of the SOLBERG foam concentrate and production lot number ID 007369 of the Nowa foam concentrate were used in the study. Mixtures of the Nowa and Solberg foam concentrates were prepared as follows:

| NOWA<br>% BY WEIGHT | SOLBERG<br>% BY WEIGHT |
|---------------------|------------------------|
| 100                 | 0                      |
| 75                  | 25                     |
| 50                  | 50                     |
| 25                  | 75                     |
| 0                   | 100                    |



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**Analytic Data** (NB = NOWA BUSHMASTER / SO = SOLBERG FIRE-BRAKE)

**Foam quality before temperature conditioning:**

(EXP = Expansion value & 25% Drain = Drain time Min:Sec)

| 100% NB / 0% SO               | 75% NB / 25% SO               | 50% NB / 50% SO               | 25% NB / 75% SO               | 0% NB / 100% SO               |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| EXP = 2.5<br>25% Drain = 2:52 | EXP = 2.9<br>25% Drain = 3:24 | EXP = 3.6<br>25% Drain = 3:19 | EXP = 5.4<br>25% Drain = 4:37 | EXP = 9.2<br>25% Drain = 5:09 |

**Foam quality after temperature conditioning:**

(EXP = Expansion value & 25% Drain = Drain time Min:Sec)

| 100% NB / 0% SO               | 75% NB / 25% SO               | 50% NB / 50% SO               | 25% NB / 75% SO               | 0% NB / 100% SO               |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| EXP = 2.6<br>25% Drain = 2:30 | EXP = 2.7<br>25% Drain = 3:19 | EXP = 3.1<br>25% Drain = 3:39 | EXP = 7.1<br>25% Drain = 4:53 | EXP = 9.4<br>25% Drain = 5:24 |

**Discussion of Results**

Both before and after temperature conditioning, all of the samples were clear liquids, water white to light straw colored with no signs of precipitation, gelling, layering or any other notable condition. The foam quality values showed no signs of deterioration after the temperature conditioning.

**Conclusion**

**SOLBERG FIRE-BRAKE Class A foam concentrate and NOWA BUSHMASTER “A” Class foam concentrate are completely compatible when mixed at all ratios.**



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