

Technical Bulletin

BioFreshTM premium bedding products pursue the science of quality care with improved soft cellulose beddings and pelleted beddings. BioFreshTM beddings deliver better absorbency by weight than other leading substrates, and our **Performance Bedding** (low density cellulose pellets) and Natural **Comfort Bedding** deliver best-in-class ammonia odor control.

ABSORBENCY BY WEIGHT

| Product Name | Instantaneous Absorbency g saline / g sample after 60 sec. | Absorbency Over Time g saline / g sample after 1 hour |
|---|--|---|
| BioFresh TM Comfort Bedding (Natural) | 4.0 | 4.9 |
| BioFresh TM Performance Bedding 1/8" | 2.4 | 2.6 |
| Aspen Shavings | 1.9 | 2.0 |
| Beta Chip | 1.4 | 1.8 |
| Bed o Cob 1/8" | 0.8 | 1.3 |
| Bed o Cob 1/4" | 0.7 | 1.2 |

AMMONIA ODOR CONTROL

| Product Name | Hours as Used NH3 < 40ppm |
|---|------------------------------|
| BioFresh TM Performance Bedding 1/8" | 132 |
| Beta Chip | 96 |
| Aspen Shavings | 96 |
| BioFresh TM Comfort Bedding (Natural) | 72 |
| Bed o Cob 1/8" | 72 |
| Bed o Cob 1/4" | 72 |

Ammonia is tested in a closed environment at a controlled temperature of 78° F. The bedding or litter is inoculated in a closed container with a quantity of laboratory collected and standardized small animal urine. A specific volume of air is sampled from the headspace of the closed container on a regular basis using gas analyzer tubes and the resultant data is graphed to determine rate and level of ammonia generation.

DUST LEVELS

| Product Name | g of dust/10g sample |
|---|----------------------|
| BioFresh TM Performance Bedding 1/8" | 0.003 |
| Bed o Cob 1/4" | 0.009 |
| BioFresh TM Comfort Bedding (Natural) | 0.026 |
| Aspen Shavings | 0.355 |
| Bed o Cob 1/8" | 0.800 |
| Beta Chip | 0.998 |

LOWER DENSITY PELLETS MEANS LIGHTER BAGS

| Product Name | Density (lbs/ft ³). | Weight of a 1.25 ft ³ Bag (lbs) |
|--|------------------------------------|--|
| BioFresh TM Performance Bedding 1/8" | 10.4 | 13.0 |
| Bed o Cob 1/4" | 22.1 | 27.6 |
| Bed o Cob 1/8" | 28.2 | 35.2 |

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INSTANTANEOUS ABSORBENCY BY BEDDING VOLUME

| Product Name | Instantaneous Absorbency <i>g saline / in³ sample measured 60 sec. after insult</i> | 1/4" fill 21.6 in ³ <i>g saline</i> | 1/2" fill 43.1 in ³ <i>g saline</i> | 3/4" fill 64.7 in ³ <i>g saline</i> | 1" fill 86.3 in ³ <i>g saline</i> |
|--|---|--|--|--|--|
| BioFresh TM Performance Bedding 1/8" | 6.57 | 141.6 | 283.2 | 424.7 | 566.3 |
| BioFresh TM Comfort Bedding (Natural) | 6.24 | 134.5 | 269.1 | 403.6 | 538.2 |
| Bed o Cob 1/8" | 5.84 | 126.0 | 252.0 | 378.0 | 504.0 |
| Beta Chip | 4.86 | 104.8 | 209.6 | 314.4 | 419.2 |
| Bed o Cob 1/4" | 3.77 | 81.4 | 162.8 | 244.1 | 325.5 |
| Aspen Shavings | 1.88 | 40.6 | 81.2 | 121.8 | 162.4 |

ABSORBENCY OVER TIME BY BEDDING VOLUME

| Product Name | Absorbency Over Time <i>g saline / in³ sample measured 1 hour after insult</i> | 1/4" fill 21.6 in ³ <i>g saline</i> | 1/2" fill 43.1 in ³ <i>g saline</i> | 3/4" fill 64.7 in ³ <i>g saline</i> | 1" fill 86.3 in ³ <i>g saline</i> |
|--|--|--|--|--|--|
| Bed o Cob 1/8" | 9.62 | 207.4 | 414.7 | 622.1 | 829.4 |
| BioFresh TM Comfort Bedding (Natural) | 7.59 | 163.6 | 327.2 | 490.8 | 654.4 |
| BioFresh TM Performance Bedding 1/8" | 7.11 | 153.4 | 306.8 | 460.1 | 613.5 |
| Bed o Cob 1/4" | 6.97 | 150.2 | 300.5 | 450.7 | 601.0 |
| Beta Chip | 6.29 | 135.7 | 271.5 | 407.2 | 542.9 |
| Aspen Shavings | 1.98 | 42.7 | 85.4 | 128.2 | 170.9 |

All BioFreshTM products are made in the USA.