**Технические характеристики**

**BORPROP RCP R1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Физико-механические показатели | 12/18' | 16/20' | 16/30' | 20/40' |
| предел прочности при неограниченном сжатии, psi. (24 часа при 121 оС) | 452 | 721 | 726 | 1 097 |
| количество отверждаемой смолы,% | 68 | 66 | 80 | 74 |
| насыпная плотность,  г\см3 | 1.68 | 1.63 | 1.65 | 1.67 |
| удельный вес, г\см3 | 2.94 | 2.89 | 2.90 | 2.93 |
| сферичность | 0.9 | 0.9 | 0.9 | 0.8 |
| округлость | 0.8 | 0.8 | 0.8 | 0.8 |
| гранулометрический состав (90% 16/20) | 99.8 | 95.9 | 99.8 | 99.6 |
| средний размер, мм | 1.299 | 1.040 | 0.942 | 0.687 |
| растворимость в кислотах   HCl + HF, % | 0.9 | 1.6 | 2.1 | 2.5 |
| мутность, ЕМФ | 126 | 109 | 114 | 81 |
| **СОПРОТИВЛЕНИЕ РАЗДАВЛИВАНИЮ (ДОЛЯ РАЗРУШЕННЫХ ГРАНУЛ), %** | | | | |
| при давлении 7500psi | 2.2 | 3.4 | 1.4 | 0.8 |
| при давлении 10 000psi | 6.0 | 4.7 | 3.7 | 1.7 |
| при давлении 12 500psi | 9.8 | 9.3 | 6.1 | 3.1 |
| при давлении 15 000psi | 15.1 | 11.6 | 8.9 | 4.5 |

### Проводимость, милли Дарси / Фут

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Давление, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 22 856 | 19 687 | 15 611 | 8 437 | 5 703 | 2 815 |
| 16/20' | 12 784 | 10 939 | 8 542 | 5 559 | 3 635 | 2 221 |
| 16/30' | 7 485 | 6 650 | 5 149 | 3 492 | 1 988 | 1 132 |
| 20/40' | 3 786 | 3 511 | 3 105 | 2 641 | 2 112 | 1 637 |

### Проницаемость, Дарси

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Давление, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 1 240 | 1 089 | 888 | 498 | 348 | 180 |
| 16/20' | 687 | 603 | 484 | 326 | 219 | 139 |
| 16/30' | 407 | 372 | 294 | 204 | 120 | 70.4 |
| 20/40' | 208 | 197 | 178 | 153 | 125 | 98.6 |

[http://aobko.ru/images/icons/go_up.png](http://aobko.ru/borprop/resin_coated_proppant/)

**BORPROP RCP R2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Физико-механические показатели | 12/18' | 16/20' | 16/30' | 20/40' |
| предел прочности при неограниченном сжатии, psi. (24 часа при 121 оС) | 985 | 1 177 | 1 486 | 1 484 |
| количество отверждаемой смолы,% | 53 | 84 | 68 | 82 |
| насыпная плотность,  г\см3 | 1.66 | 1.63 | 1.63 | 1.64 |
| удельный вес, г\см3 | 2.88 | 2.91 | 2.92 | 2.91 |
| сферичность | 0.9 | 0.9 | 0.9 | 0.9 |
| округлость | 0.8 | 0.8 | 0.8 | 0.8 |
| гранулометрический состав (90% 16/20) | 99.7 | 97.4 | 99.1 | 99.8 |
| средний размер, мм | 1.327 | 1.044 | 0.948 | 0.689 |
| растворимость в кислотах   HCl + HF, % | 0.5 | 1.2 | 1.5 | 2.2 |
| мутность, ЕМФ | 107 | 154 | 146 | 107 |
| **СОПРОТИВЛЕНИЕ РАЗДАВЛИВАНИЮ (ДОЛЯ РАЗРУШЕННЫХ ГРАНУЛ), %** | | | | |
| при давлении 7500psi | 2.1 | 3.1 | 1.2 | 0.9 |
| при давлении 10 000psi | 5.2 | 5.3 | 3.0 | 1.9 |
| при давлении 12 500psi | 8.9 | 9.0 | 4.8 | 3.2 |
| при давлении 15 000psi | 14.1 | 13.6 | 7.8 | 4.7 |

### Проводимость, милли Дарси / Фут

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Давление, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 22 749 | 19 180 | 13 502 | 6 987 | 4 433 | 2 666 |
| 16/20' | 11 943 | 10 333 | 8 084 | 5 345 | 3 246 | 1 759 |
| 16/30' | 7 515 | 6 700 | 5 602 | 4 000 | 1 988 | 1 132 |
| 20/40' | 3 995 | 3 593 | 3 137 | 2 503 | 1 986 | 1 369 |

### Проницаемость, Дарси

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Давление, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 1 216 | 1 051 | 759 | 409 | 207 | 169 |
| 16/20' | 639 | 570 | 456 | 310 | 195 | 109 |
| 16/30' | 403 | 368 | 314 | 229 | 117 | 68.5 |
| 20/40' | 219 | 199 | 178 | 144 | 117 | 82.1 |

**Technical characteristics**

**BORPROP RCP R1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Physical-mechanical characteristics | 12/18' | 16/20' | 16/30' | 20/40' |
| UCS, psi. (24 hrs. at 121 oC) | 452 | 721 | 726 | 1 097 |
| Curable resin, % | 68 | 66 | 80 | 74 |
| Bulk Density, g/ccm | 1.68 | 1.63 | 1.65 | 1.67 |
| Specific Gravity, g/ccm | 2.94 | 2.89 | 2.90 | 2.93 |
| Sphericity | 0.9 | 0.9 | 0.9 | 0.8 |
| Roundness | 0.8 | 0.8 | 0.8 | 0.8 |
| Sieve Analysis (90% 16/20) | 99.8 | 95.9 | 99.8 | 99.6 |
| Mean Size, mm | 1.299 | 1.040 | 0.942 | 0.687 |
| Acid solubility, %  (by ISO) | 0.9 | 1.6 | 2.1 | 2.5 |
| Turbidity, FTU | 126 | 109 | 114 | 81 |
| **CRUSH RESISTANCE (SHARE OF RUINOUS GRANULES), %** | | | | |
| At 7500psi | 2.2 | 3.4 | 1.4 | 0.8 |
| At 10 000psi | 6.0 | 4.7 | 3.7 | 1.7 |
| At 12 500psi | 9.8 | 9.3 | 6.1 | 3.1 |
| At 15 000psi | 15.1 | 11.6 | 8.9 | 4.5 |

### CONDUCTIVITY, MD / FT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pressure, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 22 856 | 19 687 | 15 611 | 8 437 | 5 703 | 2 815 |
| 16/20' | 12 784 | 10 939 | 8 542 | 5 559 | 3 635 | 2 221 |
| 16/30' | 7 485 | 6 650 | 5 149 | 3 492 | 1 988 | 1 132 |
| 20/40' | 3 786 | 3 511 | 3 105 | 2 641 | 2 112 | 1 637 |

### PERMEABILITY, DARCY

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pressure, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 1 240 | 1 089 | 888 | 498 | 348 | 180 |
| 16/20' | 687 | 603 | 484 | 326 | 219 | 139 |
| 16/30' | 407 | 372 | 294 | 204 | 120 | 70.4 |
| 20/40' | 208 | 197 | 178 | 153 | 125 | 98.6 |

[http://aobko.ru/images/icons/go_up.png](http://aobko.ru/en/borprop/resin_coated_proppant/)

**BORPROP RCP R2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Physical-mechanical characteristics | 12/18' | 16/20' | 16/30' | 20/40' |
| UCS, psi. (24 hrs. at 121 oC) | 985 | 1177 | 1 486 | 1 484 |
| Curable resin, % | 53 | 84 | 68 | 82 |
| Bulk Density, g/ccm | 1.66 | 1.63 | 1.63 | 1.64 |
| Specific Gravity, g/ccm | 2.88 | 2.91 | 2.92 | 2.91 |
| Sphericity | 0.9 | 0.9 | 0.9 | 0.9 |
| Roundness | 0.8 | 0.8 | 0.8 | 0.8 |
| Sieve Analysis (90% 16/20) | 99.7 | 97.4 | 99.1 | 99.8 |
| Mean Size, mm | 1.327 | 1.044 | 0.948 | 0.689 |
| Acid solubility, %  (by ISO) | 0.5 | 1.2 | 1.5 | 2.2 |
| Turbidity, FTU | 107 | 154 | 146 | 107 |
| **CRUSH RESISTANCE (SHARE OF RUINOUS GRANULES), %** | | | | |
| At 7500psi | 2.1 | 3.1 | 1.2 | 0.9 |
| At 10 000psi | 5.2 | 5.3 | 3.0 | 1.9 |
| At 12 500psi | 8.9 | 9.0 | 4.8 | 3.2 |
| At 15 000psi | 14.1 | 13.6 | 7.8 | 4.7 |

### CONDUCTIVITY, MD / FT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pressure, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 22 749 | 19 180 | 13 502 | 6 987 | 4 433 | 2 666 |
| 16/20' | 11 943 | 10 333 | 8 084 | 5 345 | 3 246 | 1 759 |
| 16/30' | 7 515 | 6 700 | 5 602 | 4 000 | 1 988 | 1 132 |
| 20/40' | 3 995 | 3 593 | 3 137 | 2 503 | 1 986 | 1 369 |

### PERMEABILITY, DARCY

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pressure, psi | 2000' | 4000' | 6000' | 8000' | 10000' | 12000' |
| 12/18' | 1 216 | 1 051 | 759 | 409 | 207 | 169 |
| 16/20' | 639 | 570 | 456 | 310 | 195 | 109 |
| 16/30' | 403 | 368 | 314 | 229 | 117 | 68.5 |
| 20/40' | 219 | 199 | 178 | 144 | 117 | 82.1 |