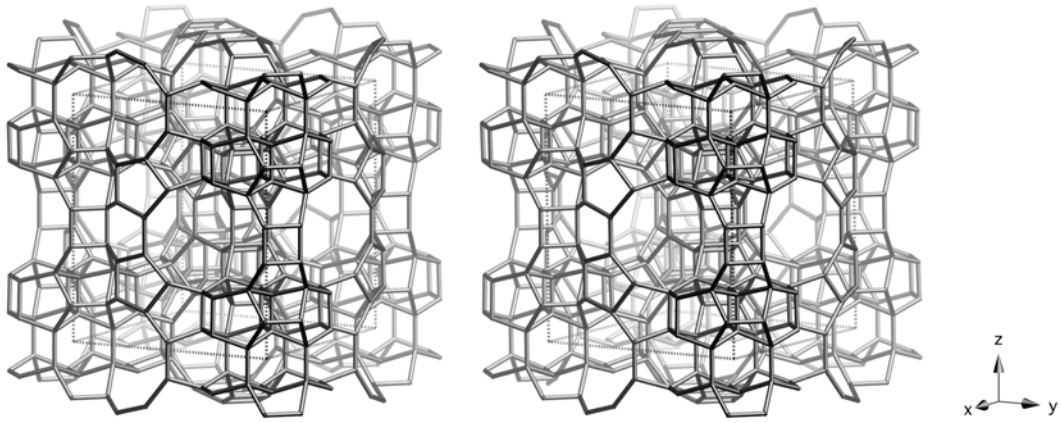
# MSE

***P*4$_2$/*mnm***

## Framework Type Data




*framework viewed normal to [001]*

**Idealized cell data:** tetragonal, *P*4$_2$/*mnm*, *a* = 18.2Å, *c* = 20.6Å

**Coordination sequences and vertex symbols:**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $T_1$ (16,1) | 4 | 10 | 19 | 33 | 53 | 83 | 114 | 141 | 174 | 227 | 283 | 329 | 4·5·4·6·5·6 |
| $T_2$ (16,1) | 4 | 10 | 21 | 34 | 57 | 84 | 112 | 139 | 181 | 230 | 274 | 317 | 4·5·4·10·5·6 |
| $T_3$ (16,1) | 4 | 12 | 22 | 33 | 50 | 75 | 114 | 152 | 183 | 220 | 267 | 324 | 5·6·5$_2$·6·6·10 |
| $T_4$ (16,1) | 4 | 11 | 20 | 36 | 54 | 78 | 106 | 148 | 193 | 225 | 254 | 317 | 4·5$_2$·5·5·5·10 |
| $T_5$ (16,1) | 4 | 12 | 18 | 35 | 58 | 81 | 110 | 143 | 177 | 230 | 271 | 328 | 5·5·5·6·5$_2$·10 |
| $T_6$ (16,1) | 4 | 10 | 20 | 34 | 56 | 83 | 109 | 140 | 181 | 226 | 282 | 337 | 4·5·4·10·5·6 |
| $T_7$ (8,..*m*) | 4 | 11 | 21 | 32 | 47 | 75 | 114 | 156 | 189 | 215 | 262 | 329 | 4·5·5·6·5·6 |
| $T_8$ (8,..*m*) | 4 | 11 | 20 | 31 | 55 | 85 | 115 | 141 | 179 | 223 | 275 | 331 | 4·5$_2$·5·6·5·6 |

**Secondary building units:** see *Compendium*

**Composite building units:**

*mor* *bea* *mtw*

**Materials with this framework type:**

*MCM-68[1]

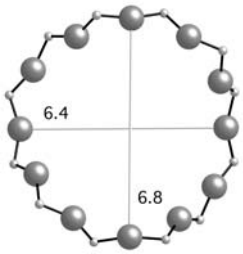
# Type Material: MCM-68 MSE

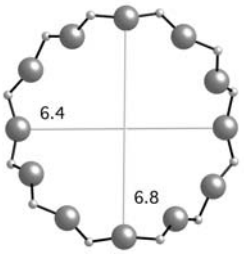
## Type Material Data

**Crystal chemical data:** [$Al_{11.4}Si_{100.6}O_{224}$]-**MSE**
tetragonal, $P4_2/mnm$, $a$ = 18.286Å, $c$ = 20.208Å [(1)]

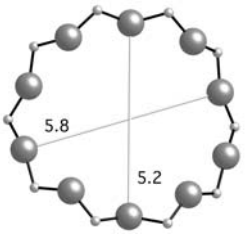
**Framework density:** 16.6 T/1000Å$^3$

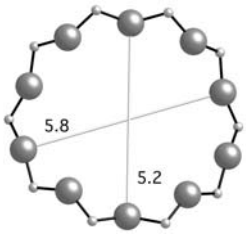
**Channels:** {[001] **12** 6.4 x 6.8 ↔ [100] **10** 5.2 x 5.8 ↔ [110] **10** 5.2 x 5.2 }***



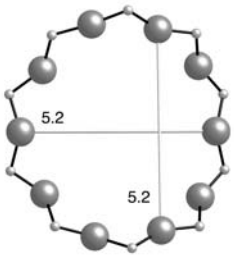



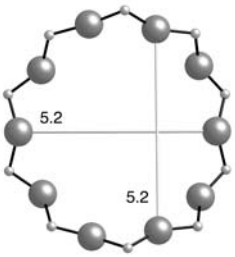

*12-ring viewed along [001]*




*10-ring viewed along [100]*




*10-ring viewed along [110]*

**References:**
(1) Dorset, D.L., Weston, S.C. and Dhingra, S.S. *J. Phys. Chem. B*, **110**, 2045-2050 (2006)