

copper oxide

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|-----------------------------|----------------------------------|
| Other names: | copper(II) oxide cupric oxide |
| Inchi: | InChI=1S/Cu.O |
| InchiKey: | QPLDLSVMHZLSFG-UHFFFAOYSA-N |
| Formula: | CuO |
| SMILES: | O=[Cu] |
| Mol. weight [g/mol]: | 79.55 |
| CAS: | 1317-38-0 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|-------------|------|--------------|
| ea | 1.78 ± 0.04 | eV | NIST Webbook |
| ea | 1.78 ± 0.01 | eV | NIST Webbook |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|-------|---------|-----------------|---|
| cps | 44.40 | J/molxK | 300.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 45.80 | J/molxK | 325.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 46.80 | J/molxK | 350.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 47.70 | J/molxK | 375.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 48.50 | J/molxK | 400.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |

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|-----|-------|---------|--------|---|
| cps | 49.20 | J/molxK | 425.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 49.70 | J/molxK | 450.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 50.30 | J/molxK | 475.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 50.80 | J/molxK | 500.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 51.20 | J/molxK | 525.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 51.60 | J/molxK | 550.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 51.90 | J/molxK | 575.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 52.30 | J/molxK | 600.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 52.60 | J/molxK | 625.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 52.90 | J/molxK | 650.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 53.20 | J/molxK | 675.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 53.50 | J/molxK | 700.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 53.80 | J/molxK | 725.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 54.00 | J/molxK | 750.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 54.30 | J/molxK | 775.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |

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|-----|-------|---------|--------|---|
| cps | 54.50 | J/mol×K | 800.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |
| cps | 54.70 | J/mol×K | 825.00 | Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system |

Sources

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| Standard enthalpy of formation of copper(II) pivalate: | https://www.doi.org/10.1016/j.jct.2018.11.016 |
| Standard enthalpies of formation of Sr ₂ CuO ₃ and Ca ₂ CuO ₃ : | https://www.doi.org/10.1016/j.tca.2004.12.017 |
| Low-temperature heat-capacity and standard molar enthalpy of formation of copper(II) pivalate: | https://www.doi.org/10.1016/j.tca.2005.12.008 |
| Thermodynamic study of Ba ₃ CuO ₄ (s) in Ba-Cu-O system: | https://www.doi.org/10.1016/j.tca.2019.05.006 |
| NIST Webbook: | http://webbook.nist.gov/cgi/cbook.cgi?ID=C1317380&Units=SI |

Legend

| | |
|-------------|---------------------------|
| cps: | Solid phase heat capacity |
| ea: | Electron affinity |

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