

Tungsten hexacarbonyl

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|-----------------------------|---|
| Other names: | Tungsten carbonyl (W(CO) ₆), (OC-6-11)- Hexacarbonyltungsten Tungsten carbonyl W(CO) ₆ Tungsten carbonyl (W(CO) ₆) |
| Inchi: | InChI=1S/6CO.W/c6*1-2; |
| InchiKey: | FQNHWXHRAUXLFU-UHFFFAOYSA-N |
| Formula: | C ₆ O ₆ W |
| SMILES: | [C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[C-]#[O+].[W] |
| Mol. weight [g/mol]: | 351.90 |
| CAS: | 14040-11-0 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|-----------------|--------|--------------|
| affp | 758.00 | kJ/mol | NIST Webbook |
| basg | 733.40 | kJ/mol | NIST Webbook |
| chs | -2250.20 ± 2.50 | kJ/mol | NIST Webbook |
| chs | -2242.70 ± 4.20 | kJ/mol | NIST Webbook |
| hf | -884.90 ± 4.50 | kJ/mol | NIST Webbook |
| hf | -877.40 ± 3.00 | kJ/mol | NIST Webbook |
| hf | -883.90 ± 2.70 | kJ/mol | NIST Webbook |
| hf | -882.90 ± 2.50 | kJ/mol | NIST Webbook |
| hf | -884.00 ± 3.00 | kJ/mol | NIST Webbook |
| hfs | -959.30 ± 2.10 | kJ/mol | NIST Webbook |
| hfs | -961.30 ± 4.30 | kJ/mol | NIST Webbook |
| hfs | -953.80 ± 2.70 | kJ/mol | NIST Webbook |
| hfs | -960.30 ± 2.40 | kJ/mol | NIST Webbook |
| hfs | -960.00 ± 3.00 | kJ/mol | NIST Webbook |
| hsub | 73.20 | kJ/mol | NIST Webbook |
| hsub | 76.40 ± 1.30 | kJ/mol | NIST Webbook |
| ie | 8.48 ± 0.05 | eV | NIST Webbook |
| ie | 8.18 ± 0.03 | eV | NIST Webbook |
| ie | 8.46 ± 0.02 | eV | NIST Webbook |
| ie | 8.56 ± 0.13 | eV | NIST Webbook |
| ie | 8.50 ± 0.10 | eV | NIST Webbook |
| ie | 8.59 | eV | NIST Webbook |
| ie | 8.24 ± 0.01 | eV | NIST Webbook |

| | | | |
|----|-------------|----|--------------|
| ie | 8.60 ± 0.02 | eV | NIST Webbook |
| ie | 8.20 | eV | NIST Webbook |
| ie | 8.00 | eV | NIST Webbook |
| ie | 8.56 | eV | NIST Webbook |
| ie | 8.30 ± 0.02 | eV | NIST Webbook |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|--------------|--------|-----------------|--------------|
| hsubt | 77.70 | kJ/mol | 276.50 | NIST Webbook |
| hsubt | 74.90 ± 1.30 | kJ/mol | 380.50 | NIST Webbook |
| hsubt | 74.40 | kJ/mol | 383.00 | NIST Webbook |
| hsubt | 78.90 ± 1.10 | kJ/mol | 271.00 | NIST Webbook |
| hsubt | 69.70 | kJ/mol | 374.50 | NIST Webbook |

Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C14040110&Units=SI>

Legend

| | |
|---------------|--|
| affp: | Proton affinity |
| basg: | Gas basicity |
| chs: | Standard solid enthalpy of combustion |
| hf: | Enthalpy of formation at standard conditions |
| hfs: | Solid phase enthalpy of formation at standard conditions |
| hsub: | Enthalpy of sublimation at standard conditions |
| hsubt: | Enthalpy of sublimation at a given temperature |
| ie: | Ionization energy |

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