Pure Molybdenum Reaction Temperatures With Various Substances

GASES

Substance	Temperature	Reaction
Air or O2	250°C	Slight Oxidation Beginning
Air or O2	600°C	Rapid Oxidation
Br	800°C	Reacts
Cl	300°C	Reacts
CO2	1200°C	Oxidation Begins
CO	1400°C	No Reaction
F	20°C	Reacts
H2	2600°C	No Reaction
H2S	1200°C	MoS forms
Hydrocarbons	**1100°C**	**Carbide formation begins**
Hydrocarbons	1300°C	Rapid Carburization
I	500°C	No Reaction
N2	1500°C	Nitrides begin to form
NOx	700°C	Oxidation
NH3	2500°C	No Reaction
SO2	700°C	Oxidation
Steam	700°C	Rapid Oxidation

OTHER ELEMENTS

C	1100°C	Carbide Formation Begins
C	1300°C	Rapid Carburization
Hg	20°C	No Significant solubility
P		No Reaction, even at higher temperatures
S	440°C	Sulfides begin to form
Si		Silicides form at higher temperatures

MOLTEN OXIDIZING SALTS

KC13, K2CO3, KNO2, KNO3		Violent Reaction at molten salt temperature
Na2CO3, NaO2, PbO2		Violent Reaction at molten salt temperature