



BOND ENERGY CALCULATIONS 1

Bond	Br-Br	Cl-Cl	C-Br	C-C	C-O	C-H	H-Cl
Bond energy (kJ/mol)	193	242	276	348	360	412	431

Bond	S=O	H-H	O-H	O=O	C=C	C=O	H-Br
Bond energy (kJ/mol)	435	436	463	498	612	743	366

For each of the following reactions, use the bond energy data to:

- calculate the energy required to break the bonds in the reactants
- calculate the energy released when the bonds in products are made
- calculate the energy change for the reaction
- state whether the reaction is exothermic or endothermic
- explain why the reaction is exothermic or endothermic in terms of bond breaking and making

