

Cambridge IGCSE Chemistry

Topic 14: Organic chemistry

Alkanes

Notes



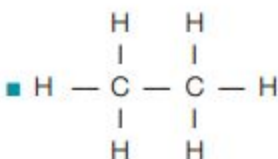


Describe the properties of alkanes (exemplified by methane) as being...

- Generally unreactive, except in terms of burning

Describe the bonding in alkanes

- Contain no C=C double bonds, therefore the carbons are saturated, because they each form 4 single bonds i.e. they form as many bonds as possible
- they have C-C and C-H single covalent bonds
- C_nH_{2n+2} is the general formula e.g. ethane is C_2H_6
- Alkane molecules can be represented in the following forms:



Covalent bond

- The first 4 alkanes are methane, ethane, propane and butane (MEPB: Monkeys Eat Peanut Butter)

(Extended only) Describe substitution reactions of alkanes with chlorine

- Halogen + alkane $-(UV)->$ halogenoalkane + hydrogen halide
 - o e.g. $Br_2 + C_2H_6 -(UV)-> C_2H_5Br + HBr$
- Must be in the presence of ultraviolet radiation (UV)

