

QUESTION 13

Which of the following is the correct Lewis structure for the molecule $\text{C}_2\text{H}_2\text{Cl}_2$?

The image shows four Lewis structures for the molecule $\text{C}_2\text{H}_2\text{Cl}_2$, labeled A, B, C, and D. Each structure consists of two carbon atoms bonded together, with two hydrogen atoms and two chlorine atoms attached to the carbons.

- Structure A:** Two carbon atoms are bonded together. Each carbon atom is also bonded to one hydrogen atom and one chlorine atom. All bonds are single bonds.
- Structure B:** Two carbon atoms are bonded together. Each carbon atom is also bonded to one hydrogen atom and one chlorine atom. There is a double bond between the two carbon atoms.
- Structure C:** Two carbon atoms are bonded together. Each carbon atom is also bonded to one hydrogen atom and one chlorine atom. There is a double bond between the two carbon atoms. The chlorine atoms are on the same side of the double bond.
- Structure D:** Two carbon atoms are bonded together. Each carbon atom is also bonded to one hydrogen atom and one chlorine atom. There is a double bond between the two carbon atoms. The chlorine atoms are on opposite sides of the double bond.