

ALLOYS

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HELPFUL LINK: <https://technologystudent.com/joints/alloys1.html>

1. Write the definition of an alloy.

2. Name the parent metal and alloying elements of a common alloy.

NAME OF ALLOY:

ALLOYING ELEMENTS:

3. Describe / explain the improved physical properties, of the alloy you named in question two.

4. With the aid of a diagram(s) and notes, describe a practical application of the alloy you named in question two. You should explain why the improved properties of the alloy, are vital for the practical application you have selected.

DIAGRAM(S)

NOTES

5. The table below lists three alloying elements, that can be added to iron and carbon, producing steel alloys. Complete the table, by adding the missing properties and uses of the steel alloys.

| ALLOYING AGENT | PROPERTIES | USES |
|----------------|---|--|
| CHROMIUM | Resists wear and increases corrosion resistance. Increases hardness and toughness | |
| VANADIUM | | Crank shafts, some hand tools. surgical instruments. |
| NICKEL | increased strength and hardness, resistance to corrosion. | |