

FlexiPrep

Rusting of Iron, Factors That Affect, Difference between Rust and Corrosion, Question (For CBSE, ICSE, IAS, NET, NRA 2022)

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Difference between Rust and Corrosion

- To identify the difference between rust and corrosion, we first need to know what these processes are. In simple terms, corrosion is a type of oxidation whereas rusting is a part of corrosion.
- The main difference though between corrosion and rust is that corrosion occurs as a result of the chemical influence and it affects a lot of materials whereas rusting is only accelerated by certain chemicals and usually affects iron substances.

Corrosion	Rust
Corrosion is the process of deterioration of materials as a result of chemical, electrochemical or other reactions.	Rusting is a part of corrosion and is a chemical process which results in the formation of red or orange coating on the surface of metals.
Corrosion can occur on different surfaces such as skin, wood, metals, etc.	Rusting usually occurs on surfaces of iron and its alloys.
Corrosion can occur when the substance is exposed to air or some chemicals.	Rusting mainly occurs when a metal is exposed to air and moisture.
Corrosion results in the formation of the oxides of metal or salts.	Only iron oxide is formed when rusting takes place.
Corrosion can occur in materials like polymers and ceramics and this type is known as degradation.	Rust or rusting can affect only iron and its alloys.
<i>Difference between Rust and Corrosion</i>	

Question

State Two Ways to Prevent the Rusting of Iron

Answer:

Rusting of iron refers to the formation of rust, a mixture of iron oxides, on the surface of iron objects or structures. This rust is formed from a redox reaction between oxygen and iron in an environment containing water.

Prevention Method of Rusting

- Many different types of coatings can be applied to the surface of the exposed metal in order to prevent corrosion. Common examples of coatings that prevent corrosion include paints, wax tapes, and varnish.
- Galvanization is the process of applying a protective layer of zinc on a metal. It is a very common method of preventing the rusting of iron.
- Providing the metals with an electric charge can help inhibit the electrochemical reactions that lead to rusting.

What is the Reaction of Rusting of Iron?**Answer:**

Rusting of iron is an example of a redox reaction. During rusting, iron combines with oxygen in the presence of water. This is an oxidation reaction where oxygen acts as an oxidizing agent. Since oxygen also combines with the metal iron, this is a reduction reaction, where the metal iron acts as a reducing agent.

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