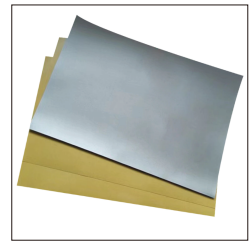


## Ferrite Dispersion



### 01 Ferrite

Ferrite refers to an oxide magnetic material mainly based on iron oxide ( $\text{Fe}_2\text{O}_3$ ). It is generally used as various types of permanent magnets, but recently it is also used as a material for shielding films that block electromagnetic waves in electronic devices.

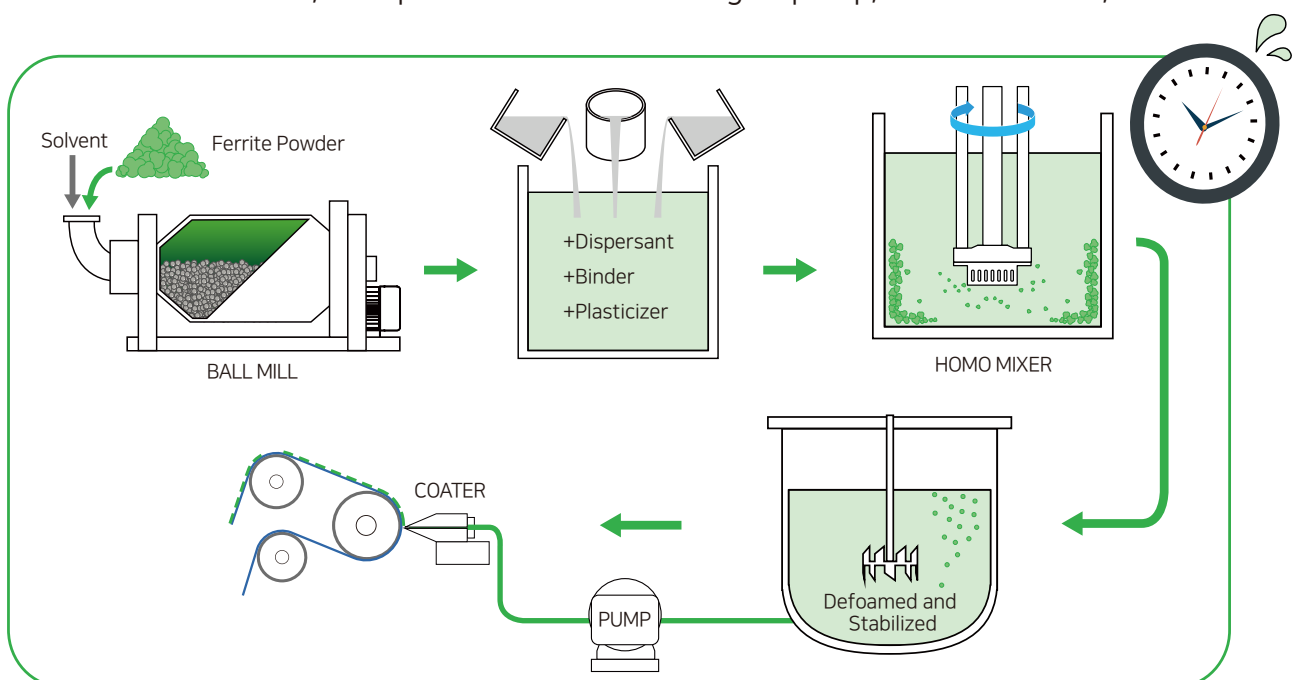
Electromagnetic waves are harmful to the human body and can cause problems due to malfunction of electronic devices and signal quality deterioration due to electromagnetic interference (EMI). Therefore, the recent growth of the multi-functionalization of smartphones, wearables, the Internet of Things, and the automotive electrification market is greatly increasing the demand for ferrite as an electromagnetic wave shielding material.

Most ferrite shielding sheets are manufactured by mixing ferrite and various additives to prepare a slurry and coating the sheet. However, when preparing a ferrite slurry, the organic matter content or dispersion conditions greatly affect the packing density after drying. In particular, if the dispersion is not good, the particles aggregate, increasing the number of pores and lowering the packing density of the sheet. After drying, the final product Even warpage occurs.

### 02 Problems With The Existing Process

The most commonly used coating sheet manufacturing method is to weigh ferrite powder together with a solvent, first crush it in a ball mill, add plasticizers, binders, dispersants, etc., and then further disperse it with a HOMO MIXER.

After this process is finished, it is transported to a vacuum tank, defoamed and stabilized, transported to a coater through a pump, coated on a film, and dried.



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