

# What is Dicronite®?

Dicronite® is a tungsten disulfide ( $WS_2$ ) solid lubricant coating. Tungsten disulfide occurs naturally as a rare mineral known as tungstenite, however it is typically synthesized using tungsten and sulfur.

While tungsten disulfide can be used in different fashions, the Dicronite® coating uses tungsten disulfide material specifically prepared for application as a dry film lubricant. This unique material preparation ensures optimal performance of the lubricant coating.

The Dicronite® coating is extremely thin, resists high and low temperatures, and functions in vacuum environments. Dicronite® meets the requirements of SAE specification AMS2530.

## How does it provide lubrication?

The molecular structure of tungsten disulfide ( $WS_2$ ) forms stacks of thin layers, also referred to as a lamellar structure. These thin layers are connected to each other by weak bonds that are easily broken. This allows layers to slide along one another with very low resistance, or low friction.

When Dicronite® is applied on contact surfaces, the material's layers provide low friction sliding, effectively lubricating the surfaces.

## Why use Dicronite®?

Dicronite® is valued for its extreme lubricity and ability to improve component performance in various types of industries and applications. It's ability to reduce friction and prevent failure in extreme environments like high or low temperatures and vacuum make Dicronite® a critical solution to difficult friction problems. For over 60 years, engineers have trusted Dicronite® for precision friction reduction.

## With Dicronite®, users can:

- prevent failures due to friction
- increase efficiency and improve mechanical performance
- reduce sliding wear, extending component life
- avoid costly downtime and repairs