ANGUS® CHEMICAL COMPANY

Key Performance Advantages

- Inhibits staining
- Emulsifies and lubricates
- Optimizes metalworking fluid performance

Metalworking Fluids

CORRGUARD® SI CORROSION INHIBITOR

A Premier Staining Inhibitor for Metalworking Fluids Intended for Use With Aluminum Alloys, Galvanized Steel and Galvaneal

Aluminum alloys are used as components in a variety of applications, in particular automobile and aircraft construction. The combination of high strength/weight ratio and corrosion resistance makes these alloys ideal choices for fuel efficient vehicles. One problem associated with the manufacturing of parts from aluminum alloys is their tendency to stain when in contact with water-based metalworking fluids. Water itself stains aluminum, as do various additives such as amino alcohols. Staining is undesirable because it adversely affects the appearance of finished parts. Staining can also be a problem with galvanized steel and galvaneal.

ANGUS has responded to the need for improved aluminum and galvanized steel staining control by developing an exceptional multi-functional, environmentally friendly staining inhibitor, CORRGUARD® SI. This material inhibits staining on common aluminum alloys including cast Al 380, as well as galvanized steel and galvaneal. CORRGUARD SI Corrosion Inhibitor is effective at concentrations as low as 0.05% (working dilution). This unique building block is free of silicates and phosphorus, and is suitable for long-life bioresistant formulations. CORRGUARD SI has a favorable toxicity profile, and is easily waste treated. It is registered in the U.S., Canada, Western Europe, Japan and Korea, and China.

CORRGUARD SI is designed primarily as an aluminum, galvanized steel and galvaneal staining inhibitor, but also provides emulsification and lubricity properties. This multi-functionality may allow other formulation ingredients to be reduced, allowing fluid cost and performance to be optimized.

Typical Properties

The following are selected physical characteristics of CORRGUARD SI. They are not to be considered product specifications.

Chemical type	Organic, anionic
Appearance	Yellow to brown liquid or gel-like solid
Solubility	Oil soluble, water dispersible
Color	Gardner 5
Viscosity at 25°C	1600 centipoise (cP)
Specific gravity at 25°C	0.9398
pH (0.1% aqueous)	7.9
Flash point (Setaflash closed cup)	210°F

CORRGUARD SI Corrosion Inhibitor can become a gel-like solid below 21°C (70°F). For ease of handling, it is recommended to store product at, or above, this temperature. Product that has solidified can be warmed to 40°C to return it to a uniform liquid. Product performance and formulating characteristics are unaffected by the physical appearance of CORRGUARD SI.

Product Stewardship

ANGUS encourages its customers to review their applications of ANGUS products from the standpoint of human health and environmental quality. To help ensure that ANGUS products are not used in ways for which they are not intended, ANGUS personnel will assist customers in dealing with environmental and product safety considerations. For assistance, product Safety Data Sheets, or other information, please contact your ANGUS representative at the numbers provided in this document. When considering the use of any ANGUS product in a particular application, review the latest Safety Data Sheet to ensure that the intended use is within the scope of approved uses and can be accomplished safely. Before handling any of the products, obtain available product safety information including the Safety Data Sheet(s) and take the necessary steps to ensure safety of use.

Contact Information

angus.com

North America
+1 (847) 808-3887

Western Europe
+33 670654658

Middle East and Africa
+33 670654658

Greater China
+65 8686 5712

Southeast Asia and New Zealand
+65 8686 5712

Latin America
+55 (11) 94245-5307

Central and Eastern Europe
+33 670654658

Indian Subcontinent
+33 670654658

Japan and Korea
+65 8686 5712

ANGUS CHEMICAL COMPANY

Published May 2015 Form No.COR-1714-0415-TCG