

DOC NO	REV	ISSUED	CLASS
TDS-CORRECT-X1	01	10/2026	Cu passivator · Grease

TECHNICAL DATA SHEET

CORRECT-X1

Copper & Copper-Alloy Corrosion Inhibitor for Greases · Yellow-metal passivator · 0.05–0.15 wt %

TREAT RATE	ACTIVE CONTENT	MELTING POINT	PHYSICAL FORM
0.05–0.15 wt %	≥ 99.5 %	96–99 °C	Crystalline solid

PRODUCT DESCRIPTION

JETTA CORRECT-X1 is a high-purity, film-forming corrosion inhibitor for copper and copper alloys, designed for use in lubricating greases. It reacts with the copper surface to form a very thin, adherent protective film that passivates the metal.

The film reduces copper oxidation, prevents staining and tarnishing, minimises copper-catalysed oxidation of the base oil, and improves copper strip corrosion results.

INCORPORATION INTO GREASE

CORRECT-X1 has limited oil solubility at room temperature and can disperse unevenly if added directly to finished grease as a solid. Recommended practice:

- Step 1: pre-dissolve CORRECT-X1 in a small amount of a compatible polar solvent or additive carrier (e.g. a synthetic ester).
- Step 2: add the solution during the cooling stage of the grease batch.
- Step 3: homogenise / mill thoroughly to ensure uniform distribution.

KEY BENEFITS

- Passivates copper, brass and bronze surfaces
- Prevents staining and tarnishing of yellow metals
- Reduces copper-catalysed oxidation of the grease
- Improves ASTM D4048 copper corrosion results
- Effective at low treat rates

RECOMMENDED TREAT RATE

- Starting range: 0.05–0.15 wt % — general lithium greases
- Optimum for most formulations: 0.05–0.10 wt % — best cost / performance balance
- Upper practical limit: ≈ 0.20 wt % — diminishing returns; possible formulation compatibility issues above this level

CAUTION: ACTIVE-SULFUR EP ADDITIVES

If the grease contains active sulfur EP additives, CORRECT-X1 alone may not achieve a 1a rating in ASTM D4048. Some sulfurised EP additives attack copper regardless of the passivator present; the sulfur chemistry must be reviewed as well.

FOR USE IN

Lithium and lithium-complex greases.

APPLICATIONS

- Rolling bearings with bronze or brass cages
- Brass fittings and bushings
- Electric motors with copper-bearing components
- Bronze worm gears

HANDLING, STORAGE & SAFETY

- Store in original sealed containers in a cool, dry, well-ventilated area, away from direct sunlight and strong oxidisers.
- Avoid dust generation; use gloves, safety glasses and dust protection when handling.
- Harmful if swallowed; causes serious eye irritation; harmful to aquatic life with long-lasting effects.
- Refer to the Safety Data Sheet (SDS) before use.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Appearance	Visual	White to off-white needle crystals / granules
Active content, %	HPLC / GC	≥ 99.5
Melting point, °C	Capillary	96 – 99
Moisture, %	Karl Fischer	≤ 0.1
Ash, %	Gravimetric	≤ 0.05
Solubility in mineral oil (25 °C)	–	Limited
Soluble in	–	Alcohols, glycols, esters

Typical values for guidance only, not a specification. Batch values are stated on the Certificate of Analysis (CoA) supplied with each lot.

The information in this data sheet is based on current technical knowledge and is provided as formulation guidance. Recommended treat rates are starting points and must be confirmed by the user's own laboratory testing for each formulation. JETTA reserves the right to update this information without notice.