Additin® RC 2310
EP Additive

Type
EP additive for metalworking and EP greases; low viscosity, light-coloured, inactive sulphur carrier

Technical data*

Composition	sulphurized vegetable fatty acid esters, mineral oil free
Appearance	light brown, clear, low viscosity liquid
Colour (ASTM-D 1500)	typ. 3.5
Sulphur	approx. 11 % weight
Active sulphur (ASTM-D 1662)	approx. 1 % weight
Copper corrosion (ASTM-D 130), 10 % weight Additin RC 2310 in a paraffinic base oil, 3 h/100°C	1b
Viscosity, 40°C (ASTM-D 445)	approx. 30 mm²/s
Density, 20°C (ASTM-D 1298)	approx. 962 kg/m³
Flash point, COC (ASTM-D 92)	> 150°C

Application
- metalworking fluids
- greases

Additin RC 2310 is a light-coloured, inactive sulphur carrier with excellent EP properties. It has a universal application in numerous high quality formulations. Due to its low active sulphur content it is ideally suited for working non-ferrous metals and aluminium alloys. By virtue of specially selected raw materials Additin RC 2310 exhibits a very low pour point (< -10°C) and viscosity compared to commercial sulphur carriers. Therefore Additin RC 2310 is ideally suited for formulating EP greases for which good low temperature pumpability is required and for low viscosity metalworking fluids.

Solubility
Soluble in mineral oils and synthetic base oils. However, it is necessary to verify the solubility in the base oils used and the compatibility with other additives.

Test results

Paraffinic base oil, ISO VG 15

	base oil, no additives	+ 2 % b.w. RC 2310	+ 5 % b.w. RC 2310	+ 10 % b.w. RC 2310	+ 15 % b.w. RC 2310
Four-Ball-Test (DIN 51350, part 2) weld load	1600 N	1900 N	2200 N	2400 N	2800 N
Four-Ball-Test (DIN 51350, part 3) 1 h/300 N scar diameter	0.40 mm	0.48 mm	0.46 mm	0.60 mm	0.67 mm
Four-Ball-Test (ASTM D 2783) 1800 rpm/10 s LWI weld point	27.6 kg 160 kg	32.0 kg 160 kg	36.7 kg 200 kg	38.1 kg 200 kg	48.1 kg 250 kg
Load-carrying test according to Brugger load capacity	< 20 N/mm²	approx. 30 N/mm²	approx. 35 N/mm²	approx. 70 N/mm²	approx. 90 N/mm²

Lithium grease based on 12-hydroxystearic acid (mineral oil base)

	+ 8 % b.w. RC 2310 + 0.7 % b.w. RC 4220		
Four-Ball-Test (DIN 51350, part 5) 1 h/150 N 1 h/300 N	0.40 mm 0.50 mm	**Copper corrosion** (ASTM-D 130) 3 h/100°C 24 h/100°C 3 h/120°C	1b 1b 1b
Four-Ball-Test welding load (DIN 51350, part 4)	2600 - 2800 N	**Emcor test** (IP 220) distilled water	no corrosion
Timken test (ASTM-D 2509) OK-Load	45 lbs		

Packing unit

200 kg bunghole drums

Storage conditions

in a dry place at room temperature approx. 24 months

Handling

Consult material safety data sheet (MSDS) for additional handling information on Additin RC 2310.

® = registered trade mark * The analytical data are guide values. Additin RC 2310 is on EINECS and TSCA inventory.

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