

# Klüberplex EM 91-151

Premium heavy-duty greases for mining and quarrying equipment



## Your benefits at a glance

- Contains 5 % MoS<sub>2</sub> and approx. 1 % graphite for reliable wear reduction under boundary and mixed friction conditions
- Long component life and good emergency lubricating properties due to well-balanced solid lubricants content
- Excellent wear protection and resistance to shock loads due to EP/AW additives
- Optimum base oil viscosity ensures good pumpability at low temperatures
- Excellent load carrying capacity due to special calcium sulfonate technology

## Your requirements - our solution

Operators of equipment for surface and underground mining expect high machine availability, reduced downtime and low maintenance costs. Klüberplex EM 91-151 is a tried-and-tested heavy-duty grease which we provide on the basis of high-quality mineral oil and a special calcium sulfonate soap thickener. With its 5 % content of MoS<sub>2</sub> solid lubricants, it offers additional excellent wear protection, especially under boundary and mixed friction conditions, to meet the specifications of well-known machine manufacturers. This product is especially designed for the demanding operating conditions of the mining industry and stone quarries, which include high loads and surface pressures at low speeds, contamination with abrasive minerals and water.

Performance characteristics:

- Outstanding wear protection due to MoS<sub>2</sub> and graphite
- Excellent load-carrying capacity at high surface pressures combined with low speeds
- Good corrosion protection
- Good adhesion to vertical surfaces even under elevated temperatures
- Excellent pumpability at low temperatures

## Application

Typical applications include bolts, pins, guide bushes, chassis components, joints, fasteners, leaf springs and sliding and rolling bearings in mining machines, e.g.

- Off-road haulers
- Wheel loaders and earth movers
- Hydraulic mining excavators
- Electric rope shovels
- Longwall shearers, continuous miners, entry drivers
- Load haul dumpers (LHD) and underground mining trucks

## Application notes

Klüberplex EM 91-151 can be applied to the lube point by brush, spatula or industrial metering systems. Single-point lubrication by lever grease gun or lubricant dispensers like Klübermatic is also possible. The ambient temperature must be considered when opting for convenient application via central lubrication systems and automatic grease pumps.

If you wish to optimise the service life of your equipment or have any other questions regarding your application, our sales engineers will be pleased to provide assistance.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüberplex EM 91-151
Cartridge 400 g	+
Bucket 25 kg	+

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Pack sizes	Klüberplex EM 91-151
Bucket 50 kg	+
Drum 180 kg	+
Characteristics	Klüberplex EM 91-151
Article number	017188
Composition, solid lubricant	graphite , molybdenum disulphide
Composition, thickener	calcium sulfonate
Composition, type of oil	mineral oil
Colour space	black
Service temperature, lower limit	-30 °C
Service temperature, upper limit	100 °C
Density, Klüber method: PN 024, 20°C	approx. 0.99 g/cm <sup>3</sup>
NLGI grade, DIN 51818	1
Worked penetration, DIN ISO 2137 / ASTM D217, 25°C, lower limit	310 0.1 mm
Worked penetration, DIN ISO 2137 / ASTM D217, 25°C, upper limit	340 0.1 mm
Kinematic viscosity of the base oil, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 12 mm <sup>2</sup> /s
Kinematic viscosity of the base oil, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 150 mm <sup>2</sup> /s
Copper corrosion, ASTM D4048, based on standard, 24 h, 100°C	1 - 100 - 24 corrosion degree
SKF-EMCOR, DIN 51802, Klüber method: distilled water, 168 h	≤ 0 corrosion degree
Oil separation, ASTM D6184, 30 h, 100°C, lower limit	≤ 5 % by weight
Flow pressure, DIN 51805-2, -30°C	≤ 1400 mbar
Mobility of Greases, LT-37 U.S. steel method, 0°F	approx. 0.15 g/s
Dropping point, DIN ISO 2176 / IP 396	≥ 220 °C
Four-ball tester: wear characteristics, ASTM D2266, based on standard, 1200 min <sup>-1</sup> / 40 kgf, 60 min, 75°C, wear scar diameter	≤ 0.7 mm
Four-ball tester, welding load, ASTM D2596	≥ 400 kgf
Four-ball tester, welding load, DIN 51350-4	≥ 4000 N
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months

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## Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 90 years.

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