



# KETTLITZ-Medialub 4220

- technical leaflet -



www.blauer-engel.de/uz178



KETTLITZ-Medialub 4220, based on vegetable oils, is free of synthetic and mineral oils and highly biodegradable.

Special additives provide a long-term protection from resinification of the vegetable oil used. The vegetable oil itself has already a good lubricating effect, which is optimized by addition of special additives. Abrasion, wear and corrosion of rotating metal parts are almost eliminated.

Good properties at low temperatures enable this bio-oil to work even under extreme winter conditions. Due to its properties, KETTLITZ-Medialub 4220 can be used for high and very high load all the year, e.g. on fast running chains of harvester aggregates.

The KWF (The Board of Trustees for Forestry Work and Technology) confirmed very good lubricating properties by an extended test. The tasks for this oil under professional conditions in forestry work in harvesters were rated "very well accomplished". Medialub 4220 is regarded as chain oil accepted by the KWF and is certified with the test mark "KWF-test bio chain oil".

Besides, KETTLITZ-Medialub 4220 meets the criteria of the German certification for environmentally beneficial products, the "Blue Angel". For the eco-label "Blue Angel" according to RAL-UZ 178 the proportion of renewable raw materials was determined by the DIN method CEN / TS 16137 (DIN SPEC 91236). The value is about 95%.

Medialub 4220 has a low (eco) toxicological hazard potential. The oil thus contributes to the reduction of environmental pollution and effectively reduces negative effects on flora and fauna.

It is not soluble in water. So, when normally used or e.g. leakage occurs, the product mainly stays in the upper ground layers and therefore does not reach the ground water.

It is also implemented in the data base of the FNR (see [https://datenbank.fnr.de/produkte/bioschmierstoffe/?\\_mstto=en](https://datenbank.fnr.de/produkte/bioschmierstoffe/?_mstto=en)).

**KETTLITZ-Medialub 4220 cannot be mixed with synthetic or mineral oil, i. e. before using them lubrication equipment (dosing station, storage containers, dispenser equipment, etc.) has to be emptied and cleaned thoroughly.**

## Properties

Chemical Characteristics		vegetable oils and dissolved polymers, containing additives
Appearance		greenish liquid
Density at 15 °C	g/cm <sup>3</sup>	0.922 ± 0.010
Refractive Index n <sub>D</sub> <sup>20</sup>		1.475 ± 0.005
Viscosity at 20 °C	(mm <sup>2</sup> /s)	510*
Viscosity at 40 °C	(mm <sup>2</sup> /s)	220 ± 10 %
Viscosity at 100 °C	(mm <sup>2</sup> /s)	45*
Viscosity Index	(VI <sub>E</sub> )	260*
Flash Point	(°C)	> 230
Storage at low temperature (72 h/-18 °C)		liquid
FZG-Test (damage load stage 12)		passed
Physiol. Behavior		see safety data sheet
Storage Stability		4 years under suitable storage conditions
Packing		5 liter and 20 liter plastic cans 200 liter drums, 1 000 liter containers, road tankers for orders ≥ 5 000 kg

## Information for consumer

acc. RAL-UZ 178

Store out of reach of children  
Do not allow unused quantities of the product to reach the sewerage system, watercourses or soil  
Product residue is to be disposed of in municipal collection points for harmful substances  
Only return empty containers for recycling

\* The viscosity data at 20 and 100 °C as well as the VI<sub>E</sub> are estimated values, which are not relevant for specification.