AQUASYN HD

GENERAL FEATURES:

Aquasyn HD and Aquasyn AL are synthetic emulsifying concentrates of universal application for machining. They easily mix with water producing durable, colourless, transparent solutions, which are featured by extended lifetime and perfect processing features including anticorrosive features achieved at very low working concentrations. Aquasyn HD and Aquasyn AL concentrates do not content mineral oil, monoethylene glycol, boron compounds and other components harmful for users including chlorine, heavy metals, phenols and nitrites.
Aquasyn HD and Aquasyn AL concentrates are resistant to low temperatures – they are stable between -10C to 50C which is important for storage and transport. Working fluid based on the Aquasyn concentrates is featured by high biological stability.

APPLICATION:

Aquasyn concentrates are intended for application in moderate conditions while machining and grinding of ferrous and non-ferrous metals.

- Aquasyn HD is intended for processing of steel, cast iron, non-ferrous metals and their alloys.
- Aquasyn AL is intended first of all for processing of aluminium/aluminium alloys, however it also may be successfully used for processing of steel, cast iron, non-ferrous metals and their alloys. It is a universal product allowing for unification of processing fluids used in a company.

High load resistance of Aquasyn based working fluid allows for achieving satisfactory effects in hard machining operations providing achievement of high roughness classes of the surface.
Recommended working concentrations of Aquasyn HD and Aquasyn AL based fluids are from 2-8% and selection of the concentration depends on the machining type and machined material.
For preparing of fluid it is recommended to use tap water of 20N of hardness, however the concentrates are featured by a perfect stability and resistance to as hard water as 30N. It may be used in both individual and central lubrication systems. Recommended concentrations:

- grinding: 2–3%,
- standard machining (turning, milling, drilling, reaming): 3–5%,
- hard machining (threading) 7–8%.

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STANDARDS, APPROVALS. SPECIFICATION:

Polish National Institute of Hygiene (PZH) approval.

PARAMETERS	UNIT	TYPICAL VALUES
Concentrate:		
Kinematic viscosity at 20°C	mm^2/s	5.0
Kinematic viscosity at 40°C	mm^2/s	2,6
Appearance	-	Colourless, transparent fluid
3% emulsion in 15°C water:		
Emulsion stability after 24h	-	Tough
Anticorrosive properties - Herbert test - Ford test	-	H0 F0
Refractometric factor at 20^0C	-	2.8

NOTE:
Physicochemical parameters listed in the table are typical values. Real values are stated in quality control certificates attached to each product lot.

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