



DESCRIPTION

During metal cutting a certain amount of heat develops, ascribable to plastic deformation of the metal and to external friction phenomena, especially to the rubbing of the metal chips on the tool.

The heat thus produced is mostly removed by the chips (approx. 80%), while what remains is distributed between the workpiece and the tool according to ratios that vary with cutting speed. The instantaneous temperature of the tool's blade can exceed even 1000°C when working strong alloy steel. It is therefore necessary to provide adequate cooling in order to stabilize the temperature. If nothing is done to limit heat production, changes in the molecular structure of both the workpiece and the tool can take place (tempering). Furthermore, deformation and cracking of both the workpiece and the tool due to thermal strain can occur. Thermal expansion of the workpiece, as a consequence of overheating, causes a non-correspondence of the final dimensions with those required. Additional effects are the welding of the machined metal to the tool, with a consequent variation of the tool itself, and abnormal wear, with an increase of the force absorbed during the cutting action.

PROPERTIES

SYNECO EMULSIONABILE N is a product made of particularly refined oil, an emulgent, and a state-of-the-art package of oil-emulsionable additives. It forms a milky emulsion, recommended for moderately heavy operations.

APPLICATIONS

SYNECO EMULSIONABILE N can be used in numerous cutting operations carried out on iron and non-iron metals.

The recommended concentration can vary from 3% to 10% depending on severeness of use.

TECHNICAL CHARACTERISTICS

CHARACTERISTIC	UNIT	VALUE	METHOD
Density at 15°C	kg/L	0.890-0.910	ASTM D1298
Herbert Test at 2.5% with metal chips		Pass	IP 125
PH in solution		10	

(The values shown above refer to normal industrial production and do not constitute technical specification).

January 20, 2014