



Metalworking

SPIRIT 5500 IN



High performance Bio stable cutting fluid

PRODUCT PROFILE

- Spirit 5500 IN is a multi purpose bio-stable micro emulsion product designed to meet cast iron machining and Aluminium machining operation.
- Spirit 5500 IN is made out of specialty non ionic adjuvant, corrosion inhibitors, biocides, fungicides, high molecular weight polyol esters and anti-wear additives. Higher shear stable film provided by the specialty anti-weld additives helps in obviating swarf build up thus helps in improving overall machine performance

APPLICATIONS

- Spirit 5500 IN is designed for use in most production engineering application including both stand alone as well as centralized machining system
- Recommended for ferrous O.D, ID, center less surface grinding, milling, drilling, boring and threading operation.

ADVANTAGES

- Micro droplet structure exhibit **exceptional hard water tolerance and emulsion longevity**
- Longer coolant life **reduces the overall coolant cost per component**
- Higher thermal conductivity **reduces built up edge thus helps to attain and maintain dimensional accuracy**
- Built-in anti-weld additive **reduces wheel dressing and improves grinding ratio**
- Low foaming character **renders better component visibility and maintain lubrication property**
- Higher degree of corrosion protection **Improves shelf life of machined components**
- **Operator and environment friendly**

Typical Characteristics	Reference Methods	SPIRIT 5500 IN
Colour	Visual	Light Amber liquid
Density at 29.5°	ASTM D 1298	0.975
Flash point PMCC, C	ASTM D 93	155
pH of 3.3 % soln	ASTM D 70	9.1
Emulsion stability	IS 1115	Passes
Cast iron corrosion test	IP 287	Grade 0
Refractometer correction factor	Internal	1.25

Above characteristics are mean values given as an information.

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Date 01/12

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RECOMMENDED DILUTION CHART

Operation	Cast Iron	Stainless Steel	Low Tensile Steel	High Tensile Steel	Aluminium
Turning	3- 4 %	4- 5 %	3- 4 %	3- 4 %	3- 4 %
Drilling	3- 4 %	4- 5 %	3- 4 %	4- 5 %	3- 4 %
Boring	3- 4 %	4- 5 %	3- 4 %	4- 5 %	3- 4 %
Milling	3- 4 %	3- 4 %	3- 4 %	3- 4 %	3- 4 %
Tapping	4- 5 %	5- 7 %	4- 6 %	5- 7 %	4- 6 %
Grinding	3- 4 %	3- 4 %	3- 4 %	3- 4 %	2- 3 %
Sawing	4- 6 %	5- 7 %	4- 6 %	5- 7 %	3- 4 %
Screw cutting	4- 6 %	5- 7 %	4- 6 %	5- 7 %	4- 6 %

To attain best results, the following procedure is suggested

A) Pre System Cleaning:

Prior to the charge of fresh coolant/emulsion ensure the whole system is thoroughly cleaned. The following steps are recommended for effective cleaning.

1. Circulate the old coolant in the system with available biocides/system cleaner for at least 2 - 4 Hrs prior to coolant change over.
2. Drain/discharge the coolant and clean the tank manually.
3. Refill the tank with minimum quantity of water along with 0.02% of system cleaner solution and circulate it for 2 Hrs. Then drain the cleaning solution.
4. Recharge the system with 0.5% of proposed coolant and circulate it for 2 Hrs. Drain the coolant completely.

B) Coolant Preparation:

1. Always add oil to water under agitation. Make sure that only clean container is used for mixing.
2. Do not use galvanized container.
3. Do not mix in machine sumps.

C) To Get The Best :

Monitor pH, concentration level regularly. Periodically remove tramp oil.

D) Disposal Of Coolant :

Never discharge the coolant directly to drain, sewer, river and streams. Follow local regulation.

REMEMBER A GOOD MIXING ENSURES LONGER COOLANT LIFE.

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