

## ECOCOOL® GLOBAL 1000

### Aerospace Industry Water Miscible Cutting and Grinding Fluid

#### Description

ECOCOOL® GLOBAL 1000 is an Aerospace industry grade water-miscible machining coolant unlike any metalworking fluid in the market today. Based on Fuchs' patented technology it provides benefits to Operations, Maintenance, Purchasing, EH&S and Quality Management.

ECOCOOL® GLOBAL 1000 helps maximize operational productivity and improves the work environment while providing costs savings.

ECOCOOL® GLOBAL 1000 contains a novel lubricity package that makes it especially effective on aluminium, titanium, Inconel and stainless steel. Studies on titanium milling show dramatic improvements in tool life and metal removal rates.

#### Application

ECOCOOL® GLOBAL 1000 is mixed with water for use. Typical in use concentration is 10% but your local FUCHS representative can provide you with specific recommendations for your operation. When mixing, always add ECOCOOL® GLOBAL 1000 concentrate to water. The product should be stored in its original sealed container at temperatures between 5°C – 40°C (41°F – 104°F). Safety data sheets are available. Before handling, read the product information and safety data sheets for proper handling and health hazard information.

#### Benefits

- Conforms to Boeing BAC 5008 Sections 5-6 (approval pending)
- Conforms to Airbus AIPS 00.00.010 (per Airbus approved laboratory)
- Increases productivity as machines experience less down time for coolant and tooling changeouts
- Lowers costs by reducing coolant and tooling consumption
- Improves the work environment by being near odourless, low foaming and rated as non-irritating to human skin
- Usable in the hardest and softest water types
- One formula offered all around the globe ensures quality no matter where it operates
- Long bath life
- Increases tool life
- Designed to meet the specifications of major aerospace OEMs
- Meets the Chemical Registry requirements of the top 19 industrialized economies and most major manufacturing companies' restricted chemicals lists.

#### How To Clean

Residual films are readily cleaned from parts with Renoclean® alkaline cleaners. Your local FUCHS representative can provide you with specific recommendations for your operation.

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## ECOCOOL® GLOBAL 1000

### Typical chemical and physical properties

Characteristics	Unit	Data	Test method
Concentrate appearance		Light Amber	
Density at 15 °C	g/ml	0.99	DIN 51 757
Viscosity of concentrate at 40 °C	mm <sup>2</sup> /s	65	DIN 51 562-1
Corrosion test emulsion $\geq 5\%$	degree of corrosion	0 – 1	DIN 51 360-2
pH value, 5 % VE-H <sub>2</sub> O		9.4	DIN 51 369
Handheld refractometer factor (Testroe)		1.3	FLV-T 5 *)

\*) FLV = Test procedure of FUCHS LUBRICANTS GERMANY GmbH

#### **Start concentration:**

To ensure the optimum corrosion protection and service life of the emulsion, we recommend a minimum concentration of  $\geq 10\%$ .

#### **Application concentration as machining emulsion:**

The application concentration must be compatible with the material and machining operation but should not drop below 8 %.

#### **Mixing temperature:**

The ideal temperature of the concentrate and mixing water should be 15 – 20 °C. Our Application Engineers will be glad to provide further assistance.

Discolouration and slight sedimentations in the cutting fluid concentrate have no adversely affect on product quality or performance.

As regards application, please observe VDI Guidelines 3035, 3397 Sections 1 – 3 and DGUV 109-003 „Tätigkeiten mit Kühlschmierstoffen“.

#### **Storage conditions:** Protect against frost!

Minimum Storage Life: 6 months from day of delivery.

Prerequisites are the correct storage in unopened, original containers, protection from direct sunlight and rain. The storage temperature should not fall below +5 °C or exceed above +40 °C.

Extensive practical experiences have shown that the characteristics of our products do not deteriorate even if the above-mentioned storage periods are exceeded.

We will be pleased to check the product in our FUCHS laboratory for further usability after the minimum storage period has been exceeded.

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