MORRIS
LUBRICANTS

SUPERCUT G

HIGH OIL, ESTER FORTIFIED EP COOLANT

DESCRIPTION

SUPERCUT G is a highly sophisticated semi-synthetic micro-emulsion cutting fluid incorporating the latest in performance additive technology. **SUPERCUT G** has a high oil content and incorporates synthetic esters and other chlorine free extreme pressure additives to ensure it has a high degree of lubricity and excellent machining performance.

SUPERCUT G has multi-metal compatibility, tolerance to tramp oil and bacterial degradation , helps reduce tool wear and gives excellent surface finishes on many different alloys. Supercut G has been developed specifically for use with the more difficult to machine alloys and aluminium. Carefully selected corrosion inhibitor systems ensure stain free performance on most metals including steels, brasses and most aluminium alloys. It is, therefore, an excellent product for workshop rationalisation and is particularly suited to modern CNC machining centres.

When diluted with most mains waters **SUPERCUT G** forms a transparent/translucent emulsion that ensures good work piece visibility.

SUPERCUT G does not contain chlorinated additives, nitrite, phenols or triazines.

FEATURES / BENEFITS

- **EXTREME PRESSURE PERFORMANCE**
- **HIGH OIL AND LUBRICITY**
- **CHLORINE FREE**
- **RESISTANT TO BACTERIAL DEGRADATION**
- **SYNTHETIC ESTER FORTIFIED**
- **HIGH PERFORMANCE CAPABILITY**
- **MULTI-METAL CAPABILITY**
- **EXTENDED SUMP LIFE**

PHYSICAL CHARACTERISTICS*

Emulsion appearance	Pale Amber Transparent/Translucent
Relative Density @ 15.6°C	1.001
pH (5% in 200ppm hardness of water)	9.0
Corrosion breakpoint IP287	1.6% (60:1)

AREAS OF APPLICATION

Typical areas of application are turning, milling, drilling, threading, boring, deep hole drilling and reaming (including Maple reaming) on aluminium and difficult to machine alloys.

GENERAL MACHINING	FREE MACHINING STEELS	3-4%
	STAINLESS STEELS	4-6%
	ALUMINIUM ALLOYS	4-7%
HIGH SPEED MACHINING	FREE MACHINING STEELS & ALLOYS	4-5%
	HARDENED STEELS	5-7%
INTERNAL TAPPING/THREAD ROLLING/	MEDIUM TENSILE STEELS	5-6%
DEEP HOLE DRILLING/BORING	STAINLESS STEELS/ ALUMINIUM ALLOYS	5-8%
REAMING/TAPPING	MEDIUM TENSILE STEELS	5-7%
	HIGH TENSILE/STAINLESS STEELS	6-10%
	ALUMINIUM ALLOYS	6-8%
NON-CRITICAL GRINDING	FERROUS MATERIALS	2.5-3%

Issue No. 2
MSDS 1065 B

Certificate No. FM 21756
BS EN ISO9001 2000

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Certificate No. EMS 60044
BS EN ISO14001 1996

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COOLANT MONITORING

DILUTION

For hand mixing, always dilute to the required strength by adding the coolant concentrate to drinking quality water, and not in the reverse order. Metering or dosing equipment can carry out this function automatically. Freshly prepared dilutions can easily be checked for concentration using a pocket refractometer.

Dilutions used for topping up frequently require to be adjusted to a lower concentration than the working strength to accommodate for drag-out and evaporation loss. **Never top up with plain water alone.**

For working coolants, not too heavily contaminated with tramp oils, a reasonably accurate estimate of sump strength can be obtained.

CONCENTRATION COOLANT (%Vol/Vol)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	10.0	12.0
WATER: COOLANT RATIO	99:1	49:1	32:1	24:1	19:1	16:1	13:1	12:1	9:1	7:1
REFRACTOMETER READING	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2	9.0	10.9

HEALTH AND SAFETY

COOLANT CARE

Following a few straightforward good housekeeping practices will ensure a trouble free working life.
Start with a clean coolant system - purged with a good systems cleaner (**SUPERCLEAN DD1 AND SUPERCLEAN KD 150 SYSTEM CLEANERS).** Charge the sump with fresh coolant at the correct dilution for the operation and regularly monitor the concentration. Periodically remove, by suction filtration, metal fines and sludges, particularly in mixed metal machining.

Tramp Oils arise from positive loss lubricators, oily stock, hydraulics, etc. If allowed to build up in the system, tramp oils are the **most frequent cause of performance loss.** Their presence leads to bacterial degradation, de-emulsification, souring (pH drop) corrosion and poor finishes.

On machines standing idle, anaerobic spoilage can be prevented by recirculating the coolant for a few hours twice weekly.

Staff will be pleased to provide on-site technical advice and training on your specific coolant requirements.

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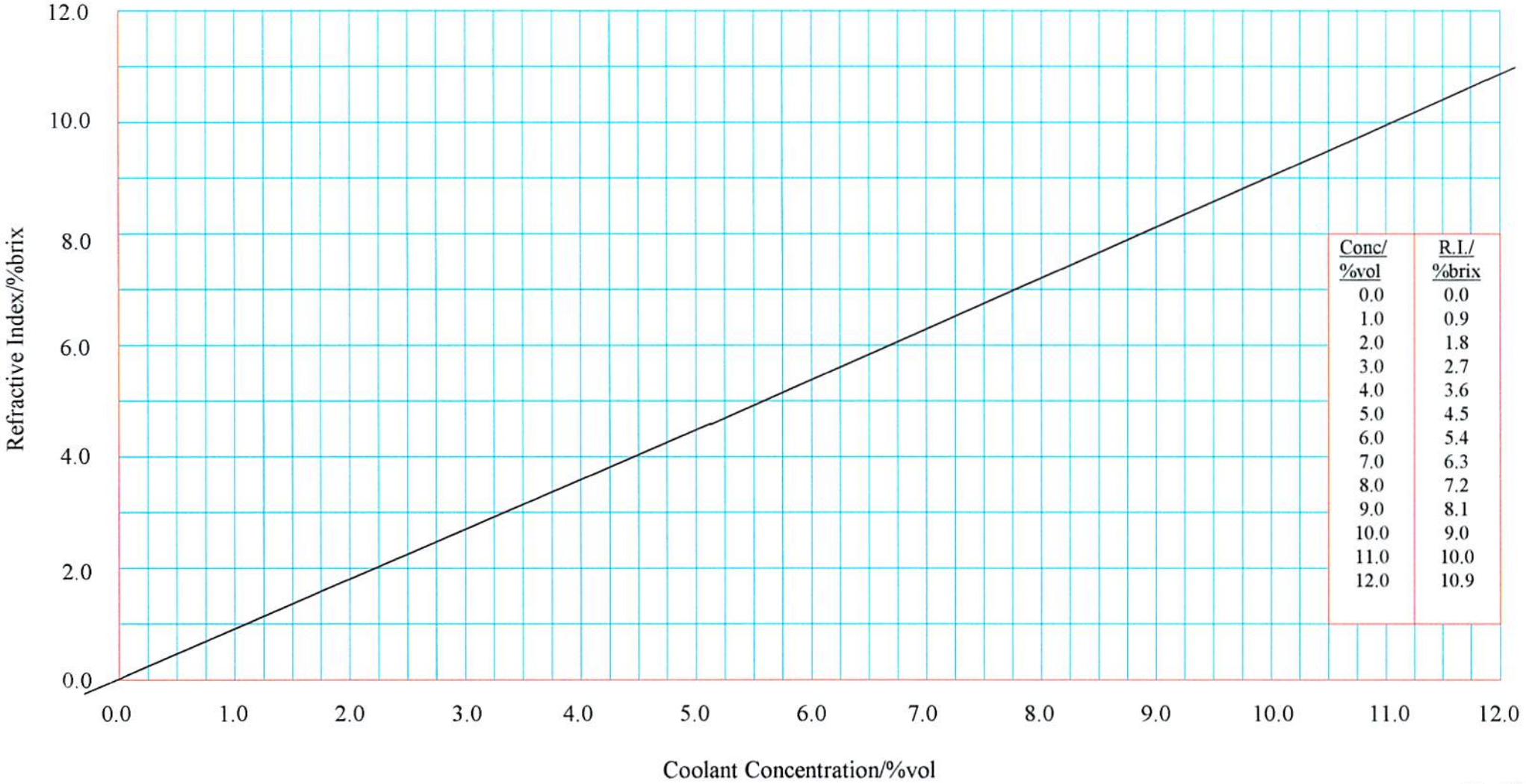
Metcut

Concentration versus Refractive Index for Supercut G



Conc/ %vol	R.I./ %brix
0.0	0.0
1.0	0.9
2.0	1.8
3.0	2.7
4.0	3.6
5.0	4.5
6.0	5.4
7.0	6.3
8.0	7.2
9.0	8.1
10.0	9.0
11.0	10.0
12.0	10.9

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