



Product Data

Syntilo[®] 24

New Generation, Fully Synthetic Grinding Fluid

Description

Castrol Syntilo[®] 24 is a new generation, fully synthetic, grinding fluid, which is mineral oil and nitrite free. Forms a crystal clear, almost colourless, solution.

Application

Castrol Syntilo[®] 24 is recommended for all forms of grinding of cast and nodular iron, alloy and carbon steels, where stock removal and cooling are the major requirements.

Benefits and Qualities

- Fully synthetic grinding fluid - contains no mineral oil. This means there is no possibility of foaming and emulsion instability - prolongs life of coolant.
- Forms crystal clear solution for ease of viewing operations in progress
- Excellent anti-rust properties.
- Solution stable even in extremely hard water (even up to 400ppm as Ca CO₃)
- Excellent cooling and wetting properties to help keep grinding wheel free of debris.
- Does not produce powdery deposits on drying.
- Does not contain nitrites, sulphurised or chlorinated additives which could cause disposal or health problems.
- Excellent foam-free characteristics.
- Less coolant maintenance due to very low tramp oil emulsifying properties.
- Contains biocides to prevent bacterial and fungal attack.

Dilution

Grinding 2.5% to 1.6% (40:1 to 60:1)

Sawing 1.6% (60:1)

N.B. We do not recommend **Castrol Syntilo[®] 24** for use on aluminium, copper or magnesium alloys. For general purposes we recommend **Cleardge[®] EP284** for use on aluminium and copper alloys, and **Honilo[®] 430 Red** for magnesium alloys.

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Bulk Item Code 022293

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Preparation and use of Castrol Syntilo® 24

1. Machine Preparation

Thoroughly clean machine tool coolant systems previously containing cutting fluids of any type, using an alkaline cleaning agent (ask your Castrol Representative for the correct product). This clean-out is **essential** since residue of old coolant could contaminate solution of **Castrol Syntilo® 24** with mineral oil, giving rise to poor performance.

2. Preparing the Solution of Castrol Syntilo® 24

Castrol Syntilo® 24 mixes very easily with water. Add a calculated volume of **Castrol Syntilo® 24** to a known volume of water and mix by circulating it in the mix tank or machine tool. Do not use bore water, drinking water is satisfactory.

3. Measuring Emulsion Strength

To ensure optimum performance of the emulsion, the emulsion strength should be checked weekly, and adjusted if necessary.

A quick, easy and accurate method is by using a refractometer, such as the At ago N10 Hand Sugar Refractometer, available from Castrol. The following graph converts the refractometer readings to percentage concentration.

Method

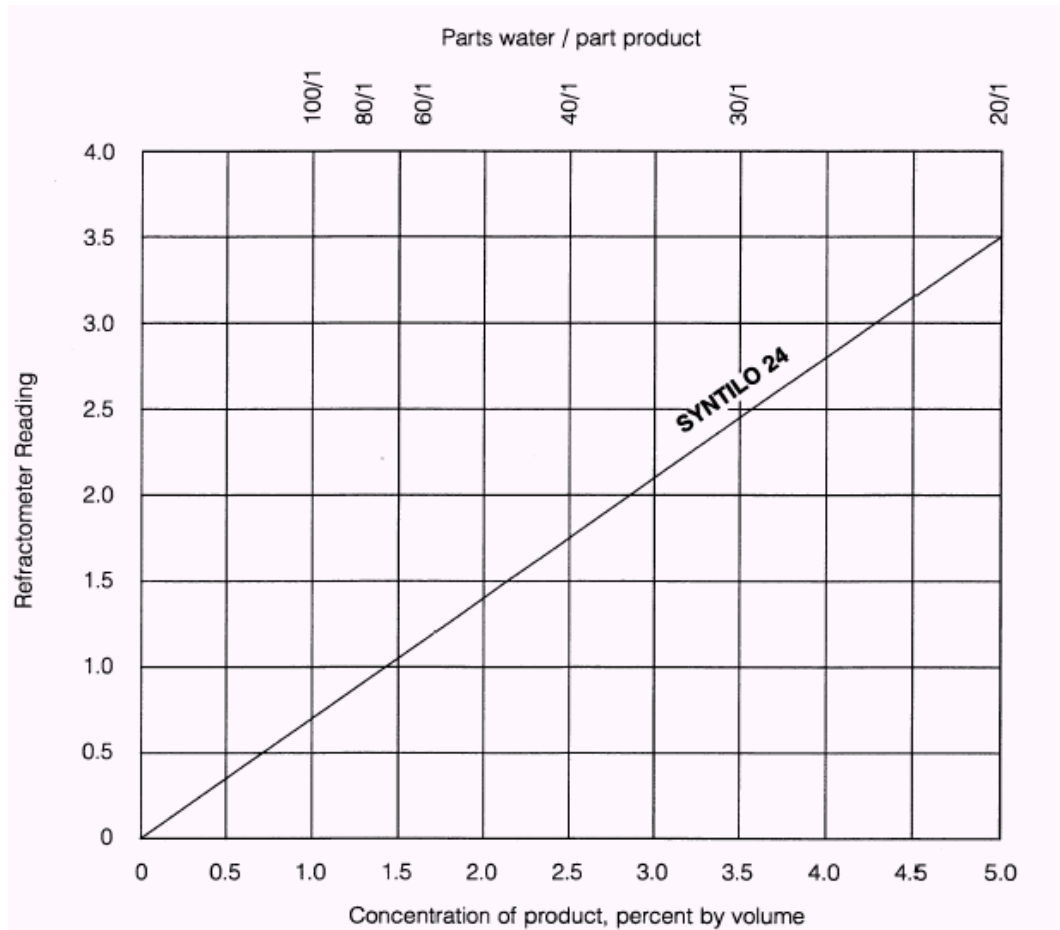
1. Zero instrument according to manufacture's instructions, including making allowance for temperature variations.
2. Allow coolant to circulate and then take representative sample of coolant from coolant systems, preferably from the 'clean' tank. Avoid picking up tramp oil. If necessary, allow sample to stand a few minutes and remove the oil from the surface.
3. Pour a large drop of coolant sample on the prism and close flap. Ensure a full film of coolant is trapped between the flap and the prism. Hold the instrument up to the light and take percentage readings.
4. After use rinse the refractometer flap and prism surfaces in tap-water and wipe dry.

Technical Data

Colour -	Neat:	Clear, pale yellow
	Solution:	Crystal clear, colourless
pH (2.5% Solution in distilled water)		9.3 typical
Corrosion Test (IP 125)		No Rust (at 100:1)

The above are typical figures and do not constitute a specification.

Refractive Index Graph



Health, Safety & Environment

Health and Safety Information – See separate Material Safety Data Sheet available on request.

Spillage:

SMALL - 20 LITRES OR LESS

Soak up on Castrol Diatomaceous Earth or similar inert absorbent. Arrange for disposal through an approved facility.

LARGE - GREATER THAN 20 LITRES

Contain as soon as possible, remove by best means available and arrange recycling (preferred) or disposal through an approved facility.

Disposal: This material must not be allowed to enter the ground, ground water, water-courses, sewers or drainage systems. Advice may be sought from the Environmental Protection Authority or from the local waste disposal authority.

All reasonable care has been taken to ensure that the information contained in this publication is accurate as of the date of printing. However, such information may, nevertheless, be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol Industrial Australia Inc. products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.

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