



## Variocut G 650 HC

High performance neat cutting oil

### Description

Castrol Variocut™ G 650 HC is a chlorine and heavy-metal free neat cutting oil based on the latest generation of Extreme High Viscosity Index (EHVI) hydrocracked base oils.

### Application

Variocut G 650 HC is designed for high speed, creep feed and gear grinding of ferrous metals with CBN and carborundum wheels. Variocut G 650 HC is also suitable for general machining and deep drilling operations on ferrous metals.

ü ü suggested core application    ü possible application, please consult Castrol representative prior to use

|                                | Cast Iron | Low-medium alloyed steel | High alloyed steel / nickel-chromium alloys | Titanium alloys | Aluminium alloys | Yellow Metals |
|--------------------------------|-----------|--------------------------|---|-----------------|------------------|---------------|
| Honing / Superfinishing        |           |                          |   |                 |                  |               |
| Grinding                       | ü ü       | ü ü                      | ü ü   |                 | ü                |               |
| Drilling                       | ü ü       | ü ü                      |   |                 | ü                |               |
| Broaching / Gear Manufacturing |           |                          |   |                 |                  |               |
| General Machining              | ü ü       | ü ü                      | ü   |                 | ü                |               |

### Advantages

- Low oil mist and foam characteristics, even at high pressures and flow rates, lead to a reduction in oil consumption and increased production rates
- Superior additive technology leads to extremely high cutting and grinding efficiencies, increased tool life, improved surface finish and lower overall operating cost
- Low viscosity and excellent wetting characteristics reduce drag out and result in lower product usage
- Good filtering characteristics and high oxidation stability increase product lifetime
- Our chlorine and heavy-metal free formulation improves the environmental profile and reduces disposal costs
- Low odour, light colour and low mist qualities result in high operator acceptability

## Typical Characteristics

| Name                                   | Test Method            | Unit                        | Variocut G 650 HC |
|--|------------------------|-----------------------------|-------------------|
| Appearance                             | Visual                 | -                           | Yellow            |
| Density @ 15°C / 59°F                  | ASTM D4052 / ISO 12185 | kg/m <sup>3</sup> - lbs/gal | 827 - 6.9         |
| Kinematic Viscosity @ 40°C / 104°F     | ASTM D445 / ISO 3104   | mm <sup>2</sup> /s          | 9.1               |
| Flash Point - open cup method          | ASTM D92 / ISO 2592    | °C/°F                       | >160 / >320       |
| Copper corrosion ( 3 hrs@100°C/212°F ) | ASTM D130 / ISO 2160   | Rating                      | 1b                |
| Brugger test                           | DIN 51347              | N/mm <sup>2</sup>           | 168               |

## Typical Physical Characteristics

|           | Ester | Active Sulphur | Inactive Sulphur | Phosphorous | Calcium | Chlorine | Zinc |
|-----------|-------|----------------|------------------|-------------|---------|----------|------|
| Additives | ü     | ü              | ü                | ü           |         |          |      |

## Storage

To avoid product deterioration always keep the container/drum tightly sealed. Store the product in a cool, dry place away from direct sunlight. Prevent exposure to frost and avoid water ingress. For optimum product stability, it is preferable to store the product indoors between 5°C and 45 °C / 41°F and 113°F.

For more details, please refer the product safety data sheet.

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