



# VARTECH™ Industrial System Cleaner

Product Data Sheet



## Product description

VARTECH™ Industrial System Cleaner (ISC) is a deposit-cleaning product added directly to the oil in use during operation to clean a system of varnish and sludge before a scheduled oil change. VARTECH™ ISC helps prepare the system for optimum performance of a new, fresh oil charge.

## Customer benefits

### VARTECH™ ISC delivers value through:

- The stabilization of varnish and sludge deposits into the oil to enable their efficient removal through a scheduled oil change, restoring system operational efficiency
- Minimal filter plugging
- Its excellent compatibility with many turbine and compressor products (mineral and synthetic hydrocarbon based)
- The retention of both oil/water separability and oxidation life performance
- Excellent seal compatibility
- Extended cleaning times

## Applications

VARTECH Industrial System Cleaner is suitable for use in concentrations between 5% to 20% of the total oil volume in the system. It is designed to be effective under normal operating temperatures, not to exceed 120°C (250°F).

SYSTEM CONDITION	RECOMMENDED TREAT RATE (VOL %)	RECOMMENDED DURATION* <sup>‡</sup> (DAYS)
Reconditioning Maintenance	5 - 10	1 - 7
Heavy Deposit Removal / Deeper System Cleaning	10 - 20	7 - 30

## VARTECH Industrial System Cleaner:

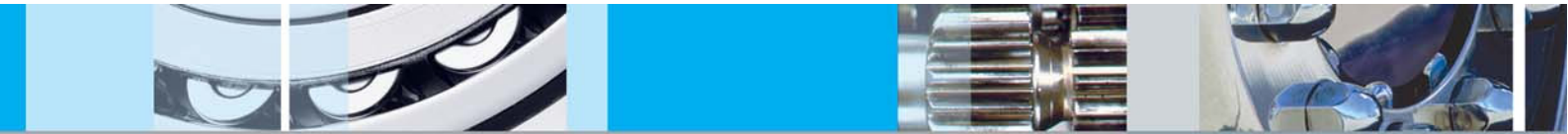
When added to the end-of-life in-service oil, VARTECH ISC's state-of-the-art triple-action technology:

- Cuts through hard varnish to remove it as micro-sized varnish particles
- Captures and stabilizes the micro-sized varnish particles in a protective barrier to enable effective removal of the varnish from the system without re-depositing to the equipment
- Provides compatibility with the in-service oil for optimum operational flexibility while maintaining system performance during the cleaning cycle to prepare for change out to fresh oil

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*\* Durations beyond times those listed above are possible but contact your Caltex Representative for additional guidance and information.*

*† All systems, particularly those with lower operating temperatures, generally benefit from longer cleaner circulation durations.*

VARTECH Industrial System Cleaner is formulated for use and is compatible with many mineral, synthetic hydrocarbon or ester based compressor and turbine oils. It is effective in varnish and sludge removal from steam and gas turbines, and various types of air compressors.

### Instructions for use

VARTECH Industrial System Cleaner is added directly to the in-service lubricating oil. If the current oil is severely deteriorated, best practice is draining the degraded oil and refilling with fresh oil so the cleaner can be added to a new fill of Caltex product meeting the OEM's specifications.

1. Determine the amount of cleaner required and the cleaning duration (refer Table)
2. Install a fresh set of filters to maximize varnish and deposit collection.
3. Ensure additional filters are available as filter changes may be required due to the release of varnish and other deposits.
4. If needed, drain an adequate volume of in-service oil to ensure maximum fill levels are not exceeded when adding the system cleaner.
5. Add VARTECH ISC to the system up to the selected treat rate, ideally while the oil is circulating.
6. Operate the equipment as normal for the selected duration and monitor filters for increased differential pressure. Replace blocked filters as required.
7. Drain the oil-cleaner mixture from the system while it is still warm and recently circulated. Ensure safe handling temperatures. When possible, drain locations in the system where oil may be trapped, e.g., filter housings, coolers, piping, de-gassing tanks, etc.
8. When possible, manually clean any accessible settled deposits and residual oil/cleaner mixture from the reservoir.
9. Industry best practice recommends a system rinse\*\* when changing oil. A rinse is particularly important when any of the following conditions exist:
  - a. Prior to cleaning, the in-service oil was experiencing rapid oil degradation or was extremely degraded,
  - b. Prior to cleaning, there were severe deposits in the system,
  - c. More than 10% of the oil-cleaner mixture remains after draining.



continued

10. Replace filters.
11. Refill the system with a Caltex product which meets the OEM's specifications.

*\*\*Rinse oil should be compatible with the final fill oil. Contact your Caltex Representative with questions or concerns.*

### Typical key properties

<b>VARTECH™ INDUSTRIAL SYSTEM CLEANER</b>	<b>TEST METHOD</b>	<b>RESULTS</b>
<b>Product Code</b>		<b>540616</b>
<b>Density at 15 °C, Kg/L</b>		0.8803
<b>Viscosity, Kinematic</b>		
cSt at 40 °C	ASTM D445	52.8
cSt at 100 °C	ASTM D445	7.7
<b>Viscosity Index</b>		110
<b>Flash Point, °C (°F)</b>	ASTM D92	146 (295)
<b>Pour Point, °C (°F)</b>	ASTM D5950	-17 (1)
<b>Fire Point, °C COC</b>	ASTM D92	264
<b>API Gravity</b>	ASTM D4052	29.2
<b>Color</b>	ASTM D1500	<1

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Chevron Global Lubricants: Africa, Middle East and Pakistan

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit [www.caltexoils.com](http://www.caltexoils.com).

**For more information, go to [www.chevronlubricants.com](http://www.chevronlubricants.com)**

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