VARTECH® Industrial System Cleaner



Industrial System Cleaner

Product description

VARTECH® Industrial System Cleaner (ISC) is a premium performance deposit cleaning product designed to be added directly to circulating oil or hydraulic systems during operation in order to help remove varnish and sludge deposits before a scheduled oil change.

VARTECH® Industrial System Cleaner helps prepare the system for optimum performance prior to a new, fresh oil change.

Customer benefits and product features

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, helping to restore system operational efficiency
- An advanced formulation to help decrease filter plugging
- Its excellent compatibility with many turbine and compressor products (mineral and synthetic hydrocarbon based)
- · Helping retain both oil/water separability and enhancing oxidation life performance
- · A solvent-free formulation designed to offer excellent seal compatibility
- Low volatility for effective cleaning times

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

- · Helps cut through hard varnish to remove it as micro-sized varnish particles
- Captures and stabilizes the micro-sized varnish particles in a protective barrier to assist with 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 helping to maintain system performance during the cleaning cycle to prepare for change out to fresh oil

Product features

VARTECH® ISC is designed to effectively remove varnish and sludge from lubricating systems in steam and gas turbines, centrifugal and rotary compressors, and hydraulic systems.

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Applications

VARTECH® ISC 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**(days)
Reconditioning Maintenance	5 - 10	1-7
Heavy Deposit Removal/ Deeper SystemCleaning	10 - 20	7-30

^{*} Durations beyond times 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 most mineral, synthetic hydrocarbon or ester-based compressor, turbine oils and hydraulic oils**. It is effective in varnish and sludge removal from steam and gas turbines, various types of air compressors and hydraulic systems.

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 oil meeting the OEM's specifications.

- 1. Determine the amount of cleaner required and the cleaning duration (refer to Table)
- 2. Install a fresh set of filters to maximize varnish and deposit collection.
- 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.
- Industry best practice recommends a system rinse*** when changing oil. A rinse is particularly important when any
 of the following conditions exist:
 - 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.
- Replace filters.
- 11. Refill the system with a product which meets the OEM's specifications.

^{**} May not be compatible with some non-mineral based synthetic fluids. Contact your Caltex representative for more information

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

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Typical Test Data

VARTECH® INDUSTRIAL SYSTEM CLEANER	TEST METHOD	RESULTS
Product Code		540616
Density at 15 °C, kg/L		0.8803
Viscosity, Kinematic mm²/s @ 100°C mm²/s @ 40°C	ASTM D445 ASTM D445	7.7 52.79
Viscosity Index		110
Flash Point, COC °C	ASTM D92	146
Pour Point, °C	ASTM D5950	-17
Fire Point, COC °C	ASTM D92	264
API Gravity	ASTM D4052	29.2
Color	ASTM D1500	<1

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 the Product Information Center.

This Product Data Sheet (PDS) was produced for the Asia-Pacific region in good faith from the best information available at the time of issue. The specific information included may not directly reflect the local market or conditions. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. For the most up-to-date, country-specific information, please contact your local customer service center.

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