

VARTECH® Industrial System Cleaner

Premium performance 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

- Helps remove varnish and sludge, helping restore system efficiency with minimal flushing.
- Designed to help reduce equipment failure by clearing deposits that can accelerate component wear.
- Formulated to restore system performance by improving operation response in servos and small passages.
- Promotes heat transfer and full load operations by removing surface varnish.
- Helps decrease filter plugging and reduce the need for frequent filter changes during cleaning.
- Solvent-free formulation designed to ensure improved seal compatibility and reduced volatility.

Product highlights

- · Designed for effective varnish and sludge removal
- Solvent free formulation helps reduce volatility
- · Helps minimise filter plugging
- · Formulated for use with compressor/turbine oils
- Promotes oxidation control
- · Helps reduce maintenance downtime

Selected specification standards include:

Siemens Energy

Applications

VARTECH Industrial System Cleaner is designed to effectively remove varnish and sludge from lubricating systems in steam and combustion turbines, centrifugal and rotary screw compressors, and stationary hydraulic systems. It is recommended for use in ISO 22 to 100 viscosity grade fluids. VARTECH Industrial System Cleaner is accepted by Siemens Energy for use in steam and gas turbines, compressors, and generators to remove varnish and deposits.

The advanced cleaning chemistry effectively dissolves and disperses varnish surface deposits to minimize filter loading during cleaning compared to leading competitor cleaners. The solvent-free formula has low volatility and excellent compatibility with most elastomer seals.

| System Condition | Recommended Concentration (Vol%) | Recommended Duration ^{1 2} |
|--|--|--|
| Maintenance Cleaning | 5% | |
| Reconditioning Maintenance Cleaning severe varnish deposits | 5%-10% | 1-7 days |
| Heavy Deposit Removal/ Deeper System Cleaning | 10%-20% | 7-30 days |

For most effective cleaning results, VARTECH Industrial System Cleaner treatment should be added to the inservice fluid and circulated in normal system operation for a period of 7 to 30 days**. Operating temperatures in the range of 50 to 120°C are ideal for high cleaning performance. Lower temperatures may reduce cleaning effectiveness and need longer cleaning times.

Instructions for use

VARTECH Industrial System Cleaner is added directly to the in-service lubricating oil. If the current oil is severely deteriorated, it is recommended the degraded oil be drained, and the cleaner added to a new fill of recommended oil.

- Determine the amount of cleaner required and the proper duration: 10% for severe varnish cleaning or 5% for maintenance service, or more if needed.
- Install a fresh set of filters to maximize varnish and deposit collection. Ensure additional filters are available for the system as filter changes may be required due to release of varnish and deposits.
- Ensure system does not exceed maximum fill levels when adding the system cleaner; if needed, drain adequate volume of oil to maintain proper operating volume.
- 4. Add Chevron VARTECH Industrial System Cleaner to the system, up to the chosen concentration, ideally while oil is circulating.
- Operate the equipment as normal for the chosen duration. Ensure operating temperatures are maintained within the recommended range. Monitor filters for increased differential pressure; replace as necessary.
- Drain the oil/cleaner mixture from the system while the oil is still warm (safe handling temperatures) and recently circulated. When possible, drain as many locations as possible in the system where oil may get trapped (i.e. filter housings, coolers, piping, degassing tanks, etc.).
- When possible, manually clean any accessible settled deposits and oil from the reservoir after draining.
- 8. System rinse* is recommended when any of the following exist:
 - a. Complete drain is not possible (more than 10% residual remaining)
 - b. Extremely degraded in-service oil
 - c. Severe deposits in the system
- Replace filters.
- 10. Refill the system with a Chevron lubricant meeting equipment manufacturers' requirement.

Contact your Texaco representative with any additional questions or concerns.

¹ Extended times beyond times listed above are possible. Contact your Texaco representative for additional guidance and information.

² Lower operating temperatures generally benefit from longer circulation times.

^{*}May not be compatible with some non-mineral based synthetic fluids.

**Extended times beyond times listed above are possible.

^{*}Flush oil used should be compatible with the final fill oil.

Approvals, performance and suitable for use

Performance

 Siemens Energy has given an Endorsement: no deterioration of the relevant operating parameters has been observed due to the addition of 10% VARTECH Industrial System Cleaner.

Product maintenance and handling

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

Avoid any spillage of used and unused product to the environment.

Product residue and package/container should be disposed of in dedicated collection points.

| Typical test data | | | |
|--|--------------|---------|--|
| Test | Test Methods | Results | |
| Shelf Life: 48 months from date of filling indicated on the product label. | | | |
| Density at 15°C, kg/l | ASTM D4052 | 0.8803 | |
| Kinematic Viscosity at 40°C, mm²/s | ASTM D445 | 53 | |
| Kinematic Viscosity at 100°C, mm²/s | ASTM D445 | 7.7 | |
| Viscosity Index | ASTM D2270 | 110 | |
| Flash Point, COC, °C | ASTM D92 | 146 | |
| Fire Point, °C | ASTM D92 | 264 | |
| Pour Point, °C | ASTM D5950 | -17 | |
| Colour | ASTM D1500 | <1 | |

The typical test data set out above does not constitute a specification. It is indicative only and can be affected by allowable production tolerances. Chevron may modify this test data. Modified data will supersede all previous data, so please ensure you refer to the latest version of this Product Data Sheet (PDS).

Disclaimer: Data provided in this Product Data Sheet (PDS) is based on standard tests under laboratory conditions and is indicative only. This product should not be used for any purpose other than those expressly set out in this PDS. The user has sole responsibility for verifying that this product is suitable for the user's intended application. Neither Chevron nor its subsidiaries (i) make any warranty or representation as to the accuracy or completeness of this PDS; and/or (ii) accept liability for any loss or damage suffered as a result of the use of this product other than in accordance with the terms of this PDS.

When disposing of used product, take care to protect the environment and follow local legislation.

Safety Data Sheets (SDS's) are available for all Chevron products. If you require a SDS or any further information regarding a Chevron product, please contact your local sales office or see www.texacolubricants.com.

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A Chevron company product