

# Cetus<sup>®</sup> DE

## Synthetic Air Compressor Oil



### Product description

**Cetus<sup>®</sup> DE** is a premium performance, synthetic compressor oil based on diester technology and containing an ashless inhibitor system, providing protection against corrosion and outstanding oxidation resistance under severe operating conditions.

### Customer benefits

- **Extended service life**  
Outstanding oxidation stability of the diester base fluid and inhibitor system resists oil breakdown at the elevated temperatures encountered in compressor service, permitting oil drain intervals to be extended beyond those achieved with conventional lubricants. Low sludge forming tendency and a high solvency for deposits that help to keep compressor parts clean even under severe service conditions.
- **Protection at high and low temperatures**  
Diester base fluid ensures an effective oil film to protect loaded parts against wear under both high temperature operating conditions and during low temperature start-up. Higher flash points, fire points, and auto ignition temperatures provide greater margin of safety as compared to conventional mineral oil products. The inhibitor system provides good rust and corrosion protection.

### Applications

- Cetus DE oils are used for portable and stationary rotary screw, rotary vane, and reciprocating compressors. While specific manufacturer recommendations vary, the ISO 68 grade is most commonly used for rotary compressors, while higher viscosity grade is preferred for reciprocating units. Also suited for the lubrication of anti-friction bearing assemblies operating under high temperature conditions (e.g. in fans, blowers and process pumps).
- Not recommended for use in breathing air compressors.
- These oils can be used in compressors with the following gases: process air, benzene, butadiene, carbon dioxide (dry), carbon monoxide, ethylene, furnace (crack) gas, helium, hydrocarbon gases, hydrogen, inert gases, methane, natural gas, nitrogen, propane, sulfur hexafluoride, and synthesis gas.

*Note that this information is intended for general guidance only. The satisfactory lubrication of gas compressors with Cetus DE is dependant on numerous factors. Advice should be sought from the equipment manufacturer in specific circumstances.*

- Cetus DE oils can be used in contact with the following seals, paints, and plastics: Viton<sup>®</sup>, High nitrile Buna N<sup>®</sup>, Teflon<sup>®</sup>, Epoxy paint, Oil-resistant alkyd, Nylon, Delrin<sup>®</sup>, Celcon<sup>®</sup>.
- These oils should not be used with: Neoprene, SBR rubber, Low nitrile Buna N<sup>®</sup>, Acrylic paint, Lacquer, Polystyrene, PVC, ABS.

*Note that this information is intended for general guidance only. Advice should be sought from the equipment manufacturer to establish the acceptability of Cetus DE with elastomers in specific operating environments.*

### Approvals, performance and recommendations

Cetus DE 68 meets the requirements of ISO 6743-3 ISO-L-DAJ for oil-flooded rotary vane and screw air compressors and vacuum pumps operating under heavy-duty conditions

Cetus DE 68 and 100 meet the requirements of ISO 6743-3 ISO-L-DAB for reciprocating and rotary (drip feed) air compressors operating under heavy-duty conditions

Cetus DE 100 is also recommended by select OEMs:

- Matsubara Iron Works Co. Ltd, for use as a reciprocating air compressor lubricant.
- Tanabe Pneumatic Machinery Co. Ltd, for use in their H-series reciprocating marine compressors

Cetus DE oils are registered by NSF and are acceptable as lubricants where there is no possibility of food contact (H2) in and around food processing areas. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements of appropriate use, ingredient review and labelling verification.

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### Service considerations

Cetus DE is designed to meet the requirements of modern higher output, more efficient compressors. These newer units are more compact and operate at higher speeds than older compressors. As a result, higher temperatures are experienced. As temperatures increase, deposit formation on valves and air separators can also increase. Operators of these newer compressors using Cetus DE will experience minimal carbon, varnish and sludge deposits on valves and air separators.

Cetus DE is compatible with conventional, non-detergent petroleum oils, although mixing will reduce the thermal and oxidation stability of the synthetic lubricant. However, it may not be compatible with seals, paints, plastics, etc., found in systems designed for petroleum oils. Where doubt exists, the equipment manufacturer should be consulted concerning compatibility with diester-based lubricants.

Diesters have excellent solvency and will aggressively "clean-up" systems deposits that might have formed while mineral oil based lubricants were in use. Therefore, oil filters need to be monitored frequently in the early stages after conversion to this product.

Cetus DE shares several properties and benefits with its PAO/synthetic ester based counterpart in the Caltex product range, Cetus PAO. Notably these are high temperature stability and long lubricant life, which typically dictate the choice of a synthetic compressor lubricant over a mineral oil product. Inevitably, there will be numerous applications for which either product could be recommended. In some cases, a stated OEM preference or approval for a specific synthetic technology may limit the choice of lubricant to one or the other.

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces.

Use only in well ventilated areas. Keep container closed.

### Typical test data

CETUS <sup>®</sup> DE	TEST METHOD	RESULTS		
<b>ISO Grade</b>		<b>68</b>	<b>100</b>	<b>150</b>
<b>Product Code</b>		<b>540532</b>	<b>540533</b>	<b>540534</b>
Flash Point, COC, °C	ASTM D92	271	252	249
Pour Point, °C	ASTM D97	-35	-35	-35
Kinematic Viscosity, mm <sup>2</sup> /s @ 40°C mm <sup>2</sup> /s @ 100°C	ASTM D445	67.5	95.5	152
	ASTM D445	7.6	10.1	14.1
Viscosity Index	ASTM D2270	66	83	89

1602

ENVIRONMENT, HEALTH, and SAFETY. Information is available on this product in the Safety Data Sheet (SDS) 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 an SDS for this product, visit the Product Information Center.

This Product Data Sheet (PDS) was produced for the Africa, Middle East and Pakistan 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.

Customers should 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.

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