



# DELO<sup>®</sup> 400 XSP ISOCLEAN<sup>®</sup> CERTIFIED LUBRICANT SAE 5W-30 (Full Synthetic)



## PRODUCT DESCRIPTION

"Delo. Let's go further.<sup>®</sup>"

Delo<sup>®</sup> 400 XSP SAE 5W-30 (Full Synthetic) ISOCLEAN<sup>®</sup> Certified

Lubricant with ISOSYN<sup>®</sup> Advanced Technology is a mixed-fleet engine oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CK-4, API SN or API SN PLUS service categories and SAE 5W-30 viscosity grade are recommended. Chevron ISOCLEAN Certified Lubricants have been certified to meet specified ISO Cleanliness standards at point of delivery using industry leading filtration and testing technology. ISOCLEAN Certified Lubricants are the first step for contamination control and maximizing component life.



## CUSTOMER BENEFITS

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is an API CK-4 performance heavy duty engine oil specifically formulated for on highway applications including 2017 greenhouse gas-compliant (GHG 17) diesel engines with lower CO<sub>2</sub> emissions and improved fuel economy, in addition to EPA 2010 compliant low emission diesel engines with Selective Catalytic Reduction (SCR), Diesel Particulate Filter (DPF) and Exhaust Gas Recirculation (EGR) systems. It is fully compatible with previous API Oil Service Categories. It delivers value through:

- **Ready to use** — Enables users to meet stringent original equipment manufacturers' cleanliness standards for fill lubricants.

- **Flexibility** — ISO Cleanliness targets can be customized to fit your business application needs.
- **Peace of mind** — Each delivery of Chevron ISOCLEAN Certified Lubricant includes an ISOCLEAN Certificate of Analysis.
- **OE fluid cleanliness requirements** — Customized to meet specific equipment manufacturers' fluid cleanliness requirements.
- **Fuel Economy Improvement** — Up to 2% improvement vs. SAE 15W-40 oil<sup>1</sup> in class 8 diesel engine bench testing.
- **Promotes Consistent Cold Engine Starting** — Low viscosity synthetic base stocks promote consistent cold engine starting for diesel engines operating in sub-zero temperature.
- **Minimized Operating Costs** — Exceptional soot dispersancy and wear control help protect cylinders, pistons, rings, and valve train components contributing to maximum vehicle utilization and minimal downtime.
- **Exceptional Deposit Control** — Provides high performance piston deposit control and turbocharger protection due to its superb oxidation performance. Its high performing detergent and dispersant additives allow for extended diesel engine component protection.
- **Excellent Emission Control System Life** — Promotes long Diesel Particulate Filter (DPF) life for minimal downtime and cleaning, thus minimizing maintenance costs.

<sup>1</sup> Actual results will vary depending upon vehicle type, load and other driving conditions.

Product(s) manufactured in the USA.

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.

A **Chevron** company product

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HDMO-48 ISOCLEAN

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- **Managed Inventory Costs** — Delo® 400 XSP SAE 5W-30 (Full Synthetic) ISOCLEAN® Certified Lubricant is compatible with previous API Oil Service Categories. Suitable for use in gasoline engines and naturally aspirated or turbocharged electronically controlled/low emission diesel engines. One oil that meets the performance requirements of most North American and European engine manufacturers. One oil that allows users with a wide mix of engine brands to enjoy simplified inventory and dispensing systems that help save money, space and handling time.
- **Warranty Plus Protection** — Bumper-to-bumper warranty protection from the engine to the drive train. Payment for Chevron lubricant-related damage to your equipment, including parts and labor.<sup>2</sup> Problem resolution and technical advice from Chevron's lubrication experts.
- **Access to Chevron's lubrication and industry knowledge** — Helps maximize your bottom line business results.

## FEATURES

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant is formulated with ISOSYN

Advanced Technology, which is the combination of Chevron's industry leading formulating expertise with unique, high performance additive chemistry to help extend the durability of your critical diesel engine parts.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology meets the most stringent EGR soot control requirements.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology has been specifically designed to meet the demands of EGR and EGR/SCR engines while at the same time providing the highest level of performance in older diesel engines.



## ISOSYN ADVANCED TECHNOLOGY

ISOSYN Advanced Technology is the combination of Chevron's outstanding formulating expertise, unique high performance additive chemistry and premium base oils that helps extend the durability of critical diesel engine parts.

Delo 400 products formulated with ISOSYN Advanced Technology can provide improved engine longevity, extended oil drain performance, and excellent diesel component parts protection, helping to extend vehicle life and minimize total cost of ownership when compared with previous generation Chevron HDMO formulations.

ISOSYN Advanced Technology benefits customers by helping to provide:

- Up to 35% improved oil oxidation control\*
- Up to 69% improved wear protection\*
- Up to 64% improved piston deposit control\*

\*Results will vary based on the Delo 400 product, operating conditions, and engine types. Always follow OEM recommendations and utilize used oil analysis testing when extending oil drain intervals.

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<sup>2</sup> See Warranty Plus for details and restrictions.

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## FUNCTIONS

Delo® 400 XSP SAE 5W-30 ISOCLEAN® Certified Lubricant with ISOSYN® Advanced Technology helps keep piston rings clean and free for optimum combustion pressure and minimal wear. Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology minimizes valve and piston crown land deposits, thereby managing oil consumption. Its high level of ashless dispersants keeps fuel soot in suspension and helps to avoid filter plugging, abrasive wear, viscosity increases, and oil gelation. These problems could cause excessive engine wear and bearing failure, without prior warning.

Optimized additive chemistries combined with synthetic base stocks control oxidation, sludge, and undue thickening between oil drains. Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant engine oil's antiwear technologies protect against valve train wear and scuffing of highly loaded parts operating under boundary lubrication. A defoaming additive helps prevent air entrainment.

## APPLICATIONS

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is a mixed-fleet engine oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CK-4, API SN or API SN PLUS service categories and SAE 5W-30 viscosity grade are recommended. It is formulated for engines operating under severe service.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is excellent for use in new, advanced engines developed to meet the latest emissions and reliability standards and in engines equipped with features like super-charging, turbo-charging, direct injection, higher power density, intercooling, full electronic management of fuel and emissions systems, exhaust selective catalytic reduction, exhaust gas recirculation, and exhaust particulate filters.

Vocational and light duty fleets are often a mix between diesel and gasoline engines. This product is recommended for API SN and API SN PLUS, and will meet the latest gasoline qualifications providing for one oil in a mixed vocational, short haul, or delivery fleet.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is formulated for exceptional performance with many fuels, including low

sulfur and ultra low sulfur diesel fuels, gasoline, most gasoline fuel blends, and many biofuel formulations.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is recommended for use in older engines in conditions when SAE 5W-30 viscosity grade is recommended, as well as in today's most modern low emission designs.

Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is recommended for use in Caterpillar engines in off-highway or construction applications in conditions when SAE 5W-30 viscosity grade is recommended.

### **Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant is approved for:**

- **API Service Categories** CK-4, CJ-4, CI-4, CI-4 PLUS, CH-4, SN, SN PLUS
- **Cummins** CES 20086
- **Daimler MB-Approval** 228.51
- **Daimler MB-Approval** 228.31
- **DEUTZ** DQC IV-18 LA
- **Detroit Fluids Specification (DFS)** 93K222
- **Mack** EOS 4.5
- **Volvo** VDS-4.5

### **Delo 400 XSP SAE 5W-30 ISOCLEAN Certified Lubricant is recommended for:**

- **ACEA European Service Categories** E7, E8, E11
- **Caterpillar** ECF-3
- **JASO** DH-2
- **MTU** Category 3.1

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.

## TYPICAL TEST DATA

<b>SAE Grade</b>	<b>5W-30</b>
<i>Product Number</i>	<i>278098</i>
<i>SDS Number</i>	
<i>U.S.</i>	<i>45138</i>
<i>Canada</i>	<i>45139</i>
<i>Mexico</i>	<i>45140</i>
Density at 15°C, kg/L	0.85
Viscosity, Kinematic	
mm <sup>2</sup> /s at 40°C	72.4
mm <sup>2</sup> /s at 100°C	12.1
Viscosity, Cold Crank, °C/mPa.s	-30/6100
Viscosity, MRV, °C/mPa.s	-35/35,000
Viscosity, HTHS, mPa.s	3.5
Viscosity Index	165
Flash Point, °C(°F)	224(435)
Pour Point, °C(°F)	-46(-51)
Sulfated Ash, mass %	1.0
Base Number, mgKOH/g, ASTM D2896	10
Phosphorus, mass %	0.08
Sulfur, mass %	0.3
Zinc, mass %	0.08

Minor variations in product typical test data are to be expected in normal manufacturing.

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