

ENGINE OILS

HiTEC[®] 12350 **HDEO Additive Package**



Made For China Top Tier Heavy Duty Engine Oil Additive

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Application

HiTEC® 12350 is a product designed for a diverse AP market including China which requires various Industry specifications (ACEA E8-22, API CK-4, API FA-4 and the latest China D1).

The approvals for this product include CES 20100, CES 20086, CES20087, DTRF15C110 (MB 228.51), Volvo VDS 4.5, MAN 3775, MTU 3.1 and Deutz IV-18LA.

- Lower Viscosity HDEOs to contribute to fuel economy**
 Chinese OEMs must comply with new legislation to deliver 15% fuel economy in their latest vehicle designs. Lower viscosity oils reduce internal friction and pumping losses to help contribute to fuel economy. HiTEC® 12350 covers 5W-30, 10W-30, 10W-40 and 15W-40 viscosity grades.
- Protection for after-treatment systems**
 To comply with China VI emissions legislation Chinese OEMs are installing onboard after-treatment systems, such as diesel particulate filters (DPFs), in their latest hardware designs. HiTEC® 12350 has <1% ash content so it is compatible with these after treatment systems.
- Maintenance Savings via Long Oil Drain Intervals (ODIs)**
 To help their customers reduce total cost of ownership and save on maintenance, Chinese OEMs want durable engine oils that can deliver ultra-long ODIs out to 100,000KM-150,000KM ODI. HiTEC® 12350 has been developed with these drain intervals in mind.
- Key North American and European Industry & OEM specifications coverage**
 HiTEC® 12350 unites top tier performance from Europe and North America in one pack with API CK-4, API FA-4, ACEA E6-16 and ACEA E8-24 coverage. It also has Volvo approval. These approvals are vital to some key Chinese OEMs' technology partnerships.

HiTEC® 12350 is Made In Asia, in Afton's Singapore manufacturing facility, to deliver lead time and working capital benefits.

HiTEC® 12350 is extremely cost effective due to its low treat rate @ 16.1% wt. for its top tier API CK-4, API FA-4, ACEA E6-16 and ACEA E8-24 coverage, use of HiTEC® 5748 25SSI OCP and excellent base oil system.

Recommended Dosage

The dosage of HiTEC® 12350 HDEO additive package has one of the lowest treat rates of any top tier package currently available that meets API CK-4, API FA-4, ACEA E6-16 and ACEA E8-24 at just 16.1% t.r.

Typical Characteristics

| | |
|---|-------|
| Density @ 15°C, g/ml | 0.951 |
| Flash Point, °C (PMCC) | 150 |
| Kinematic Viscosity @ 100°C, mm ² /s | 133 |
| Total Base Number, mg KOH/g | 61 |

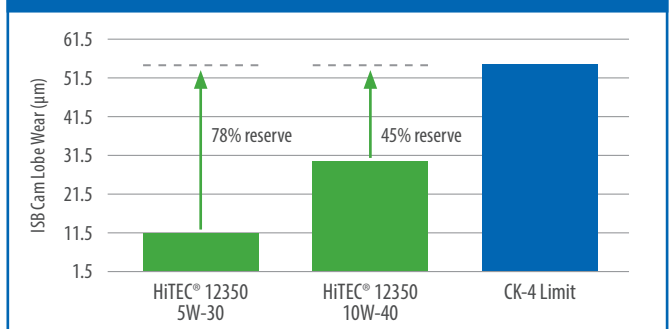
Handling Information

Maximum Handling Temperature: 70°C

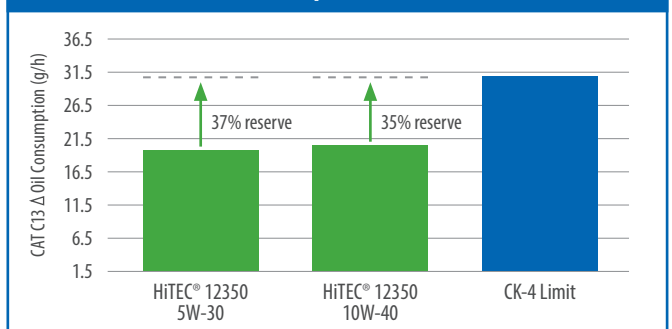
Shelf Life: 24 months at ambient temperature

| HiTEC® 12350 @ 16.1% wt | | Approvals | | | | | | | | | | | | | | | | |
|-------------------------|------------|-----------|----------|------------|------------|------------|-------------|-----------|-----------|-----------|-----------|------------------------|------------------------|----------|---------------|--------------------|---------|---------------|
| Viscosity | Grade | API CK-4 | API FA-4 | ACEA E6-16 | ACEA E9-16 | ACEA E8-24 | ACEA E11-24 | JASO DH-2 | CES 20100 | CES 20087 | CES 20086 | DTRF15C110 (MB 228.51) | DTRF15C100 (MB 228.51) | MAN 3775 | Volvo VDS 4.5 | Garrett/Alfa-ECE-3 | MTU 3.1 | Deutz IV-18LA |
| 5W-30 | GRP III | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | |
| 5W-30 | GRP II/III | | | | | | | | | | | | | | | | | |
| 10W-30 | GRP II | | | | | | | | | | | | | | | | | |
| 10W-30 | GRP III | | | | | | | | | | | | | | | | | |
| 10W-40 | GRP II/III | | | | | | | | | | | | | | | | | |
| 15W-40 | GRP II | | | | | | | | | | | | | | | | | |

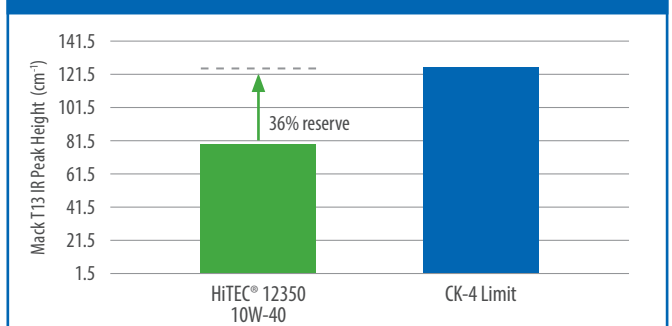
Excellent Cam Wear Protection



Better Oil Consumption vs API CK-4 Limit



Excellent Oxidation Resistance



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