

# 6646 Winter Klenz ID

## with Ice Check™ Xtreme Torque® & WASA

### DESCRIPTION:

Injector nozzle coking is not the only concern faced by modern high pressure common rail (HPCR) engines. Internal diesel injector deposits (IDID) are causing substandard performing injectors that lead to decreased power, decreased fuel economy, and increased regulated emissions. This coupled with other ailments, which can be present in ultra low sulfur diesel (ULSD) – require the need for a Premium Select premium diesel additive (PDA).

Winter Klenz ID (WKID) 6646 is a Premium Select winterized PDA which imparts high performance qualities to diesel fuel. WKID 6646 was engineered to eliminate injector problems associated with today's HPCR engines, enhance many other qualities of fuel and may be used in traditional diesel engines. WKID 6646 provides "Premium Diesel Fuel" qualities to ULSD in terms of deposit control, corrosion, filter blocking tendency (FBT), lubricity, low temperature operability and cetane number. Its effective anti-gel and wax anti-settling additive (WASA) greatly improve cold temperature performance. Ice Check™ provides additional winter protection against freezeups. In addition WKID 6646 contains Xtreme Torque®, a powerful cetane improver, for quicker cold starts and a maximum boost in power and performance and vastly superior IDID clean / keep clean additives.

### COMPOSITION:

WKID 6646 contains the following additives:

- |  |  |
|--|--|
| <input type="checkbox"/> IDID Specific Additives               | <input type="checkbox"/> WASA  |
| <input type="checkbox"/> Cetane Improvers                      | <input type="checkbox"/> Flow Improvers                                |
| <input type="checkbox"/> Detergents                            | <input type="checkbox"/> Corrosion Inhibitors                          |
| <input type="checkbox"/> Antifouling Agents                    | <input type="checkbox"/> Anti-Gel Additives                            |
| <input type="checkbox"/> Dispersants                           | <input type="checkbox"/> Anti-Oxidants                                 |
| <input type="checkbox"/> Lubricity Agents                      | <input type="checkbox"/> Anti-Icing Additives                          |
| <input type="checkbox"/> Stabilizers                           | <input type="checkbox"/> Metal Deactivators                            |
| <input type="checkbox"/> Rust Inhibitors                       | <input type="checkbox"/> Asphaltene Dissolution and Dispersion Agents  |
| <input type="checkbox"/> Anti-Static Agents                    | <input type="checkbox"/> Carboxylate Dissolution and Dispersion Agents |
| <input type="checkbox"/> Thermal Stability Rejuvenation Agents | <input type="checkbox"/> Filterability Rejuvenation Agents             |

### PERFORMANCE CHARACTERISTICS:

**Injector Deposit Control (Detergency)** – WKID 6646 eliminates and prevents IDID formation and traditional nozzle coking deposits, thus improving/sustaining power, fuel economy, and regulated emissions caused by injector deposits.

**Low Temperature Performance** – WKID 6646 lowers Pour Point, Cold Filter Plugging Point, and Low Temperature Fluidity. It prevents diesel fuel gelling and greatly improves cold temperature operability. Fuel can be treated with WKID 6646 to pass the ASTM D975 Low Temperature Performance requirements. Ice Check™ not only disperses water, but also lowers its freeze point for superior winter performance.

**Cetane** – WKID 6646 improves ignition efficiency, improves cold starts, reduces warmup time, smoothes engine operation, increases power and fuel economy. WKID 6646 is formulated with Xtreme Torque® to produce an increase of 3 cetane numbers or 30 points, in responsive diesel fuels, at its optimum treatment rate.

**Stability** – Fuel can also be treated with WKID 6646 to improve stability of the treated fuel. Thermal stability may be measured by ASTM D6468 Thermal Stability Test as well as other commonly used storage stability tests. In responsive diesel fuel, thermal stability can be restored.

**Lubricity** – WKID 6646 improves lubricity of diesel fuels in both the HFRR Test and the BOCLE Test, which is a critical factor with ULSD No. 2 and No.1.

**Rust and Corrosion Protection** – Prevents all types of rust and corrosion in fuel lines, strainers, pumps and injectors.

**Filter Blocking Tendency** - WKID 6646 improves fuel flow through filters, in responsive fuels, as measured by ASTM D2068.

## 6646

### Winter Klenz ID with Ice Check™, Xtreme Torque® & WASA

#### USES

- Cold Snap, including Polar Vortex Operability
- Clean/Prevent Internal Diesel Injector Deposits (IDID)
- Prevent Diesel Fuel Gelling
- Help Prevent Icing
- Disperse Moisture
- Boost Power and Reduce Combustion Noise
- Increase Cetane Number
- Dissolve & Disperse Asphaltenes ("Black Filter")
- Clean/Maintain Entire Fuel System
- Improve Cold Starts
- Diesel Fuel Fluidity after Long-Weekend Shutdowns
- Prevent Sludge Induced Filter Plugging
- Clean/Keep Clean Whole Injectors
- Improve Cold Starts & Reduce NOx, CO & CO<sub>2</sub> Emissions
- Highly Effective in Bio-Diesel
- Greatly Extend Filter/Fuel System Life
- Reduce Injector System Maintenance
- Extend Engine Life
- Extend Fuel Storage Life
- Increase/Maintain Fuel Economy (Miles per Gallon)
- Dissolve and Disperse Carboxylates
- Break Down and Disperse Heavy Wax
- Keep Wax Crystals Dispersed throughout Fuel
- Improve Flow through Filter(s)
- Extend Life of Fuel Injectors & Fuel Pumps
- Restore Oxidated and Thermally Stressed Fuels
- Rust & Corrosion Protection
- Promote Redissolving of Wax Crystals
- Decrease Explosion and Fire Risk of Stored Fuels
- Aftertreatment Device Life Extension
- Extend Fuel System Life
- Diesel Fuel Gelling Protection
- Petro-Diesel/R99/HVO/Bio-Diesel Compatible
- Xtreme Torque® - Fleet with 50% Reduction in Regens

#### APPLICATIONS:

WKID 6646 is an extremely versatile product that can be used in a wide range of effective treatment ratios from an economical 1:3000 to 1:750 for cleaning and maximum performance benefits or for non-responsive or poor quality diesel fuels. WKID 6646 is recommended for ULSD. Use at 1:1500 for enhanced DW-10 (CEC F-98-08)/XUD-9 (CEC F-23-01) performance in suitable diesel fuels and optimal overall performance in most applications including lubricity in kerosene. Treat rates as low as 1:3000 may be used to provide significant enhancement of all properties in responsive fuels. Use at 1:750 for IDID DW-10B (CEC 98-08) performance, outstanding XUD-9 (CEC F-23-01) performance, to clean and prevent carboxylate and sticky IDID or to achieve specific target criteria in certain fuels including restoring fuel system cleanliness.

WASA Protection Treatment Ratios (80 plus% of fuels): For 3 days of continuous shutdown protection, use at 1:1500; for 5 days plus of continuous shutdown protection, use at 1:750.

Higher treatment ratios are recommended when treating diesel fuels above a B5. The sulfur content of this diesel fuel additive does not exceed 15 ppm. This diesel fuel additive complies with the federal low sulfur content requirements for use in diesel motor vehicles and nonroad engines.

#### TYPICAL SPECIFICATIONS:

Appearance	Yellow-Orange
Viscosity, mm <sup>2</sup> /sec @ 40° C	7.5
Flash Point, °F	125
Density (#/gal)	7.5
Pour Point, °F	-5° F
Klenz ID® Product's HFRR Wear Scar Range	200 µm - 340 µm
Baseline Diesel HFRR Wear Scar	610 µm