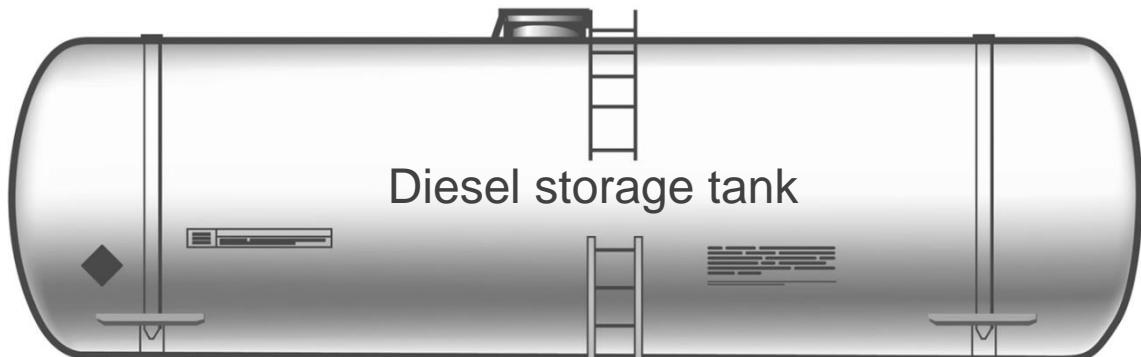


Diesel fuel physical characteristics

While each country has their own diesel fuel requirements, there are basic characteristics that are common to all diesel fuels.



Cloud Point: the temperature below which paraffinic waxes, naturally present in diesel, begin to crystallize and form a haze in the fuel. Crystallization of the wax can result in fuel filter plugging.

Sulfur: occurs naturally in all crude oils. Presence in fuel results in exhaust emissions of sulfur dioxide. Ultra low sulfur diesel fuel is required for exhaust aftertreatment systems because the catalysts can be sensitive to sulfur poisoning.

Cetane number: measure of diesel fuel ignition quality. Higher cetane generally benefits cold start, more complete combustion, and increased efficiency - up to a point of diminishing returns.

Lubricity: the fuel's ability to protect the fuel system from mechanical wear i.e. metal-to-metal contact.

Biodiesel: renewable component of diesel fuel derived from biological sources (i.e. animal fats, recycled cooking oil, vegetable oils derived from soybeans, rapeseed, palm, and coconut). Depending on fuel supplier, customer preference or local regulations, biodiesel may not be present at all, be present at a small percentage (B5-B7), or may be nearly all of the fuel blend (B99).

Diesel Efficient™

Fuel characteristics

- Diesel Efficient is formulated using the base diesel fuel for your specific market and a patented additive
- Diesel Efficient will be compliant with the same local regulations and performance requirements as its base fuel
- Diesel Efficient helps impart additional performance characteristics into the base fuel
 - Cleans dirty fuel systems
 - Helps reduce filter blocking tendency in biodiesel
 - Helps preserve stability of thermally stressed fuel
 - Provides excellent fuel system corrosion protection
- Diesel Efficient will meet or exceed the performance requirements of engine manufacturers which the base fuel meets
- Diesel Efficient is compatible with other like fuels which includes biodiesel