



# DEF

## Diesel Exhaust Fluid

# For Use In All SCR Emission Control Systems

### High Purity 32.5% Aqueous Urea Solution

**Meets ISO 22241 specifications · API Certified**

Non-Toxic · Non-Flammable · Non-Polluting · Non-Hazardous  
No Special Handling Required

**Super S DEF Meets Applicable Standards, Specifications and Performance Requirements for use in all SCR Emission Control Systems**



### Why Do We Need DEF?

In order to meet the EPA 2010 mandate that oxides of nitrogen (NOx) emitted from diesel truck engines be reduced to almost zero levels by 2010, most manufacturers have chosen to use SCR, Selective Catalytic Reduction, technology.

### How Does It Work?

SCR Emission Control Systems consist of a catalyst, a reducing agent (DEF) and a dosing system which injects a mist of DEF into the exhaust downstream of the engine and diesel particulate filter. The DEF mist vaporizes in the heat of the exhaust forming ammonia and carbon dioxide which then reacts with the catalyst and NOx emissions, converting NOx to nitrogen and water, which are harmless.

Certified and monitored by the American Petroleum Institute (API) as meeting ISO specifications for purity and quality to insure the DEF you put in your tank runs clean and won't foul your SCR System.



### How Much Will I Use? What Happens If I Run Out? What If It Freezes? What about Storage?

SCR systems are designed to use approximately 2 gallons of DEF for every 100 gallons of fuel, with a range among most engine manufacturers reported to be around 1 to 3 gallons DEF/100 gal fuel. Actual usage may run higher as consumption will vary with engine performance and driving conditions. SCR equipped trucks are expected to provide increased engine efficiency/ fuel economy, providing a reduction in operating costs, even when factoring in the additional cost of DEF. If you run out of DEF, engine power will be substantially reduced until you add DEF.

DEF freezes below 12°F, but freezing will not harm DEF. It can be used again, once it thaws. DEF tanks are equipped with heaters to thaw DEF and keep it liquid in cold temperatures.

#### Handling and Storage

DEF should be stored at temperatures between 10 and 86°F. Above 86°F, shelf life (in a non-vented container) may degrade to less than a year. **Super S DEF has a very low initial alkalinity to provide maximum shelf life and longest service life for the SCR System.** DEF is corrosive, such as to aluminum, copper, brass and zinc, and should be stored in approved containers such as HDPE plastic or stainless steel. DEF and all surfaces with which it comes into contact must be completely clean or it will compromise DEF's purity and harm or degrade the SCR system.

#### Packaging:

SUS160-3 3 - 1 gallon/case

SUS160-2 3 - 2 gallon/case w/ filler spouts

SUS160-55 55 gallon drum

SUS160TOTE 275 gallon tote



**Smitty's Supply, Inc.**

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