

## Safety Data Sheet

### SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

#### DELPHI DIESEL +

**Product Use:** Diesel fuel additive  
**Product Number(s):** 001412

**Company Identification**  
DELPHI Diesel Systems Ltd,  
Spartan Close,  
Warwick,  
CV34 6AG, UK.

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### SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	EC NUMBER	SYMBOL / RISK PHRASES	AMOUNT
Distillates (petroleum), hydrotreated light	265-149-8	Xn/R65, R66, R67	64 %weight
2-ethylhexyl nitrate	248-363-6	R44, Xn/R20/21	23 %weight
Branched chain alkaryl hydrocarbon	272-258-4	Xn/R65, R67, N/R51/53	5 %weight
Polyolefin polyamine succinimide	Polymer	R53	4 %weight
Solvent naphtha (petroleum), heavy aromatic	265-198-5	Xn/R65, R66, R67, N/R51/53	0.7 %weight

The full text of all R-phrases is shown in Section 16.

### SECTION 3 HAZARDS IDENTIFICATION

**CLASSIFICATION:** R44 | Xn; R65 | R66 | R67 | R52/53 |

#### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. The product contains Branched alkyl nitrate which can be absorbed through the skin during prolonged or repeated contact, causing headache, dizziness, nausea and decreased blood pressure.

**Ingestion:** Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

**Inhalation:** Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

**DELAYED OR OTHER HEALTH EFFECTS:** Not classified.

**ENVIRONMENTAL EFFECTS:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### SECTION 4 FIRST AID MEASURES

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, apply a waterless hand cleaner, mineral oil, or petroleum jelly. Then wash with soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

**Note to Physicians:** Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

### SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

#### FLAMMABLE PROPERTIES:

**Flashpoint:** (Setaflash Closed Cup) 62 °C (144 °F) Minimum

**Autoignition:** No Data Available

**Flammability (Explosive) Limits (% by volume in air):** Lower: No data available Upper: No data available

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**PROTECTION OF FIRE FIGHTERS:**

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen .

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities as appropriate or required.

**SECTION 7 HANDLING AND STORAGE**

**Specific Use:** Diesel fuel additive

**Precautionary Measures:** Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Special handling instructions** for products containing 2-ethyl hexyl nitrate.

This product should be handled in a closed system. Pumped transfers must take place under controlled conditions. All transfer valves must be opened before starting to pump. To prevent irreversible exothermic decomposition, use only pumps fitted with a thermal cut-out set to stop the pump if product temperature exceeds 45°C. Heated transfer lines must not be used. Multi-product transfer lines must be cleared and pumps drained before and after product transfer.

Keep away from oxidising substances.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

**General Storage Information:** In normal storage conditions, the shelf life of this product is 1 year.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

**ENGINEERING CONTROLS:**

If user operations generate airborne material, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Silver Shield, Viton.

**Respiratory Protection:** If exposure to harmful levels of airborne material may occur when working with this material, wear an approved respirator that provides protection, such as: Air-Purifying Respirator for Organic Vapors.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

No applicable occupational exposure limits exist for this material or its components. Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Attention:** the data below are typical values and do not constitute a specification.

**Color:** Brown

**Physical State:** Liquid

**Odor:** Hydrocarbon odor

**pH:** Not Applicable

**Vapor Pressure:** No data available

**Vapor Density (Air = 1):** No data available



**Boiling Point:** No Data Available  
**Solubility:** Insoluble in water.  
**Freezing Point:** No Data Available  
**Specific Gravity:** 0.849 @ 15°C (59°F)  
**Density:** No Data Available  
**Viscosity:** 2 mm<sup>2</sup>/s @ 40°C (104°F)

#### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Unstable at elevated temperatures.

**Conditions to Avoid:** May decompose and explode when heated above the temperature 100°C

**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Polymerization:** Hazardous polymerization will not occur.

#### SECTION 11 TOXICOLOGICAL INFORMATION

##### IMMEDIATE HEALTH EFFECTS

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

#### SECTION 12 ECOLOGICAL INFORMATION

##### ECOTOXICITY

This material is expected to be harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

##### MOBILITY

No data available.

##### PERSISTENCE AND DEGRADABILITY

May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

##### POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No Data Available

#### SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

In accordance with European Waste Catalogue (E.W.C.) the codification is the following: 07 07 99.

#### SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**ADR/RID Shipping Description:** UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE), 9, III, Hazard ID No.90

**ICAO/IATA Shipping Description:** UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE), 9, III

**IMO/IMDG Shipping Description:** UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE), 9, III, MARINE POLLUTANT

#### SECTION 15 REGULATORY INFORMATION

##### REGULATORY LISTS SEARCHED:

01=EU. Directive 76/769/EEC: Restrictions on the marketing and use of certain dangerous substances.

02=EU Directive 90/394/EEC: Carcinogens at work.

03=EU Directive 92/85/EEC: Pregnant or breastfeeding workers.

04=EU Directive 96/82/EC (Seveso II): Article 9.

05=EU Directive 96/82/EC (Seveso II): Articles 6 and 7.  
06=EU Directive 98/24/EC: Chemical agents at work.

The following components of this material are found on the regulatory lists indicated.  
Distillates (petroleum), hydrotreated light 06  
Solvent naphtha (petroleum), heavy aromatic 06

#### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: EINECS (European Union), IECSC (China), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), KECI (Korea).

#### CLASSIFICATION - LABELING:

Under the criteria of the directive EEC/67/548 (dangerous substances) and EEC/1999/45 (dangerous preparations):

- contains: Solvent naphtha (petroleum), light aromatic  
Solvent naphtha (petroleum), heavy aromatic  
Branched chain alkaryl hydrocarbon  
Distillates (petroleum), hydrotreated light

**Symbols:** Xn - Harmful

R44; Risk of explosion if heated under confinement.  
R65; Harmful: may cause lung damage if swallowed.  
R66; Repeated exposure may cause skin dryness or cracking.  
R67; Vapors may cause drowsiness and dizziness.  
R52/53; Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
S61; Avoid release to the environment. Refer to special instructions/safety data sheets.  
S62; If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

#### SECTION 16 OTHER INFORMATION

**REVISION STATEMENT:** This is a new Material Safety Data Sheet.  
**Revision Date:** APRIL 25, 2006

#### Full text of R-phrases:

R20; Harmful by inhalation.  
R21; Harmful in contact with skin.  
R44; Risk of explosion if heated under confinement.  
R51/53; Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53; Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R53; May cause long-term adverse effects in the aquatic environment.  
R65; Harmful: may cause lung damage if swallowed.  
R66; Repeated exposure may cause skin dryness or cracking.  
R67; Vapors may cause drowsiness and dizziness.

#### ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
CVX - Chevron	CAS - Chemical Abstract Service Number

Prepared according to the criteria of the directive 2001/58/EC by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.