

# Material Safety Data Sheet

Diesel Anti Knock Plus



## 1. Identification of the material and supplier

### Names

**Product name** : Diesel Anti Knock Plus  
**American Code** : 2789  
**German Code** : 2504  
**ADG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, 2-Ethylhexyl Nitrate)

### Supplier

**Supplier/Manufacturer** : LIQUI MOLY GMBH  
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**Emergency telephone number** : +49-0731-1420-0

### Uses

**Area of application** : Industrial applications.  
**Material uses** : Additive.  
**Product type** : Liquid.

## 2. Hazards identification

**Classification** : Carc. Cat. 2; R45  
Xn; R65  
**Risk phrases** : R45- May cause cancer.  
R65- Also harmful: may cause lung damage if swallowed.  
**Safety phrases** : S53- Avoid exposure - obtain special instructions before use.  
**Statement of hazardous/dangerous nature** : HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

## 3. Composition/information on ingredients

**Mixture** : Yes.

Ingredient name	CAS number	Concentration
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	60 - 100
2-Ethylhexyl Nitrate	27247-96-7	10 - 30
Solvent naphtha (petroleum), heavy arom.	64742-94-5	1 - 3

Other ingredients, determined not to be hazardous according to NOHSC criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

## 4. First-aid measures

**Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Obtain medical attention if symptoms occur.  
**Skin contact** : Wash with soap and water. Obtain medical attention if symptoms occur.  
**Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.  
**Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

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## 4 . First-aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Advice to doctor** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5 . Fire-fighting measures

### Extinguishing media

**Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Not suitable** : Do not use water jet.

**Special exposure hazards** : Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods for cleaning up


**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- Combustible liquid** : Combustible liquid Class C1 (AS 1940).

## 8 . Exposure controls/personal protection

- Occupational exposure limits** : **No exposure standard allocated.**
- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Exposure controls**
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. During formulation, follow good industrial hygiene practice.
- Eye protection** : Safety glasses.
- Skin protection** : Lab coat.
- Respiratory protection** : A respirator is not needed under normal and intended conditions of product use.
- Hand protection** : Natural rubber (latex).
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- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9 . Physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Brown. [Light]
<b>Odour</b>	: Characteristic.
<b>Relative density</b>	: 0.814
<b>Flash point</b>	: Closed cup: 63°C (145.4°F) [Pensky-Martens.]
<b>Vapour density</b>	: >1 [Air = 1]
<b>Viscosity</b>	: Kinematic (40°C): <0.07 cm <sup>2</sup> /s (<7 cSt)
<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.

## 10 . Stability and reactivity

<b>Stability</b>	: The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid exposure - obtain special instructions before use. Do not swallow.
<b>Materials to avoid</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 . Toxicological information

### Potential acute health effects

<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: Aspiration hazard if swallowed. Can enter lungs and cause damage.
<b>Skin contact</b>	: May cause skin irritation.
<b>Eye contact</b>	: May cause eye irritation.

### Acute toxicity

Product/ingredient name	Dose	Species	Result	Exposure
Solvent naphtha (petroleum), heavy aromatic	Rabbit	>2 mL/kg	LD50 Dermal	-

### Potential chronic health effects

<b>Chronic effects</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Inhalation</b>	: No specific data.
<b>Ingestion</b>	: Adverse symptoms may include the following: nausea or vomiting
<b>Skin</b>	: No specific data.
<b>Eyes</b>	: No specific data.

## 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.





**Other adverse effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## 14 . Transport information

### International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADG</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, 2-Ethylhexyl Nitrate)	9	III		-
<b>ADR</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, 2-Ethylhexyl Nitrate)	9	III		-
<b>IMDG</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, 2-Ethylhexyl Nitrate)	9	III		<b>Emergency schedules (EmS)</b> F-A; S-F
<b>IATA</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic, 2-Ethylhexyl Nitrate)	9	III		-

PG\* : Packing group

## 15 . Regulatory information

### Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

### Control of Scheduled Carcinogenic Substances

**Ingredient name**

**Schedule**

No listed substance

**Australia inventory (AICS)** : All components are listed or exempted.

## 16 . Other information

**Person who prepared the MSDS** : Atrion Regulatory Services, Inc.

### History

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### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.