



according to Regulation (EC) No 1907/2006

989 Injektor Direkt-Reiniger Diesel MF98900300A

Print date: 22.06.2016

Product code: 11AMF98900300A

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Additive

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP Deutschland Vertriebs GmbH & Co. Betriebs KG		
Street:	Bürgermeister-Seidl-Str. 2		
Place:	D-82515 Wolfratshausen		
Telephone:	+49 (0) 8171/1600 - 0	Telefax:	+49 (0) 8171/1600 - 40
e-mail:	sdb@tunap.com		
Internet:	www.tunap.com		

1.4. Emergency telephone number: +49 (0) 30 30 686 790 (Giftnotruf Berlin)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Indications of danger: Xn - Harmful, N - Dangerous for the environment

R phrases:

Flammable.

Harmful by inhalation, in contact with skin and if swallowed.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Harmful: may cause lung damage if swallowed.

Repeated exposure may cause skin dryness or cracking.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Specific target organ toxicity - single exposure: STOT SE 3

Aspiration hazard: Asp. Tox. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Flammable liquid and vapour.

Harmful if swallowed or if inhaled.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Toxic to aquatic life with long lasting effects.

2.2. Label elements**Hazard components for labelling**

Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates

2-Ethylhexyl nitrate

Signal word: Danger

Pictograms: GHS02-GHS07-GHS08-GHS09



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**Hazard statements**

H226	Flammable liquid and vapour.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapour.
P280	Wear eye/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water.
P314	Get medical advice/attention if you feel unwell.
P273	Avoid release to the environment.

Special labelling of certain mixtures

EUH044	Risk of explosion if heated under confinement.
EUH066	Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
919-857-5	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	50 - < 100 %
64742-48-9	Xn - Harmful R10-65-66-67	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066	
01-2119463258-33		
248-363-6	2-Ethylhexyl nitrate	10 - < 20 %
27247-96-7	Xn - Harmful, N - Dangerous for the environment R20/21/22-44-51-53-66	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Aquatic Chronic 2; H302 H312 H332 H411 EUH044 EUH066	
203-234-3	2-Ethylhexan-1-ol	3 - < 5 %
104-76-7	Xn - Harmful, Xi - Irritant R20-36/37/38	
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H332 H315 H319 H335	
01-2119487289-20		

Full text of R, H and EUH phrases: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****After inhalation**

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions



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for use or safety data sheet if possible).

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs:
Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.
Caution if victim vomits: Risk of aspiration!

4.2. Most important symptoms and effects, both acute and delayed

Headache, nausea, dizziness, fatigue, skin irritation

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂). Foam. Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion hazard.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Do not breathe gas/fumes/vapour/spray.



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Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Vapours may form explosive mixtures with air.
Heating causes rise in pressure with risk of bursting.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition.
- No smoking.

Advice on storage compatibility

Do not store together with: Material, rich in oxygen, oxidizing.

7.3. Specific end use(s)

In use, may form flammable/explosive vapour-air mixture.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

- a no restriction
- b End of exposure or shift
- c in long-term exposure: after several shifts
- d prior to next shift

STEL (EC) : Short Term Exposure Limit

TWA (EC): time-weighted average

U: Urea

B: Blood

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.

DIN EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min

Thickness of the glove material 0,45 mm

DIN EN 374

Skin protection

Wear suitable protective clothing.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Filtering device with filter or ventilator filtering device of type: A



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Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: liquid
 Colour: brown
 Odour: solvent like

Test method

pH-Value (at 20 °C): not applicable

Changes in the physical state

Melting point:	No information available.
Initial boiling point and boiling range:	165 °C
Sublimation point:	No information available.
Softening point:	No information available.
:	No information available.
Flash point:	47 °C ISO 3679
Lower explosion limits:	0,6 vol. %
Upper explosion limits:	7 vol. %
Ignition temperature:	No information available.
Vapour pressure:	No information available.
Density (at 20 °C):	0,8526 g/cm ³ DIN 51757
Bulk density:	No information available.
Water solubility:	insoluble
Partition coefficient:	No information available.
Viscosity / dynamic:	No information available. DIN 53019-1
Viscosity / kinematic: (at 40 °C)	< 7 mm ² /s DIN EN ISO 3104
Flow time:	No information available.
Vapour density:	No information available.
Evaporation rate:	No information available.
Solvent separation test:	No information available.
Solvent content:	No information available.

9.2. Other information

Solid content: No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is stable under normal conditions.



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10.3. Possibility of hazardous reactions

Concentrated vapours are heavier than air. Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Keep away from heat. Ignition hazard.

10.5. Incompatible materials

Reacts with : Oxidizing agents.

10.6. Hazardous decomposition productsIncomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.**Further information**

Do not mix with other chemicals.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No information available.

Acute toxicity

Harmful if swallowed or if inhaled.

Acute toxicity, oral. Acute toxicity, inhalant. Acute toxicity, dermal.

ATEmix calculated

ATE (oral) 1923,1 mg/kg; ATE (inhalative vapour) 17,74 mg/l; ATE (inhalative aerosol) 4,867 mg/l

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates				
	oral	LD50 mg/kg	> 5000	Rat	
	dermal	LD50 mg/kg	> 5000	Rabbit	
	inhalative (4 h) vapour	LC50	4951 mg/l	Rat	
27247-96-7	2-Ethylhexyl nitrate				
	oral	LD50 mg/kg	>9640	Rat	
	dermal	LD50 mg/kg	>4820	Rabbit	
	inhalative (4 h) vapour	LC50	11 mg/l	Rat	
	inhalative aerosol	ATE	1,5 mg/l		
104-76-7	2-Ethylhexan-1-ol				
	oral	LD50	2047 mg/kg	Rat	
	dermal	LD50 mg/kg	> 3000	Rat	
	inhalative (4 h) vapour	LC50	11 mg/l	Rat	
	inhalative aerosol	ATE	1,5 mg/l		

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Caution if victim vomits: Risk of aspiration!



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Sensitising effects

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates)

Severe effects after repeated or prolonged exposure

Repeated exposure may cause skin dryness or cracking.

Has degreasing effect on the skin. Frequently or prolonged contact with skin may cause dermal irritation.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

No indications of human carcinogenicity exist.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

Aspiration hazard

May be fatal if swallowed and enters airways.

Specific effects in experiment on an animal

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates					
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna	
27247-96-7	2-Ethylhexyl nitrate					
	Acute fish toxicity	LC50	2 mg/l	96 h	Brachydanio rerio (zebra-fish)	
	Acute algae toxicity	ErC50	>1 - <10 mg/l	72 h	Algae toxicity	
	Acute crustacea toxicity	EC50	<10 mg/l	48 h	Daphnia magna	
104-76-7	2-Ethylhexan-1-ol					
	Acute fish toxicity	LC50	17,1 mg/l	96 h	Leuciscus idus (golden orfe)	
	Acute algae toxicity	ErC50	11,5 mg/l	72 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50	39 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

There are no data available on the mixture itself. AOX (mg/l): 0

12.3. Bioaccumulative potential

There are no data available on the mixture itself.



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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	5
27247-96-7	2-Ethylhexyl nitrate	3,74 - 5,24
104-76-7	2-Ethylhexan-1-ol	2,9

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	UN 3295
14.2. UN proper shipping name:	HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Limited quantity:	5 L
Transport category:	3
Hazard No:	30



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Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3
Classification code: F1
Limited quantity: 5 L

Marine transport (IMDG)

14.1. UN number: UN 3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3
Marine pollutant: no
Special Provisions: 223
Limited quantity: 5 L
EmS: F-E, S-D

Air transport (ICAO)

14.1. UN number: UN 3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3
Special Provisions: A3 A324
Limited quantity Passenger: 10 L
IATA-packing instructions - Passenger: 355
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 366
IATA-max. quantity - Cargo: 220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes
Danger releasing substance: 2-Ethylhexyl nitrate

14.6. Special precautions for user

Warning: Combustible liquids.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): No information available.

Additional information

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National regulatory information

Water contaminating class (D): 2 - water contaminating

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,14.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA: International Air Transport Association
 IMDG: International Maritime Code for Dangerous Goods
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
 WEL (UK): Workplace Exposure Limits
 TWA (EC): Time-Weighted Average
 ATE: Acute Toxicity Estimate
 STEL (EC) Short Term Exposure Limit
 LC50: Lethal Concentration
 EC50: half maximal Effective Concentration
 ErC50: means EC50 in terms of reduction of growth rate

Relevant R phrases (number and full text)

10	Flammable.
20	Harmful by inhalation.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
36/37/38	Irritating to eyes, respiratory system and skin.
44	Risk of explosion if heated under confinement.
51	Toxic to aquatic organisms.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53	May cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH044	Risk of explosion if heated under confinement.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on

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our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)