



according to Regulation (EC) No 1907/2006

984 Injektor Direkt-Schutz Diesel MF98400200Y3

Print date: 22.06.2016

Product code: MF98400200Y3

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Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
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.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap..
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P273	Avoid release to the environment.
P501	Dispose of contents/container to Dispose of contents / container in accordance with local regulations.

Special labelling of certain mixtures

EUH066	Repeated exposure may cause skin dryness or cracking.
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2.3. Other hazards

No information available.

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		
918-481-9	Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	50 - < 100 %
64742-48-9	Xn - Harmful R65-66	
	Asp. Tox. 1; H304 EUH066	
01-2119457273-39		
201-148-0	2-methylpropan-1-ol; iso-butanol	5 - < 10 %
78-83-1	Xi - Irritant R10-37/38-41-67	
603-108-00-1	Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H226 H335 H315 H318 H336	
248-363-6	2-Ethylhexyl nitrate	5 - < 10 %
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	
204-881-4	2,6-di-tert-butyl-p-cresol	1 - < 3 %
128-37-0	N - Dangerous for the environment R50-53	
	Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1; H400 H410	
01-2119565113-46		

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



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

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs.

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

Causes eye irritation., 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

Flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

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. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

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



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7.1. Precautions for safe handling**Advice on safe handling**

Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Vapours can form explosive mixtures with air.

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 locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

Further information on storage conditions

No information available.

7.3. Specific end use(s)

Additive

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	WEL

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

TWA (EC): time-weighted average

U: Urea

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

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.



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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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear 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

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

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

Physical state:	liquid
Colour:	green
Odour:	solvent like

	Test method
pH-Value (at 20 °C):	not determined DIN 19268

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	100 °C
Sublimation point:	No information available.
Softening point:	No information available.
:	No information available.

Flash point:	33 °C	ISO 3679
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Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	0,6 vol. %
Upper explosion limits:	10,9 vol. %
Ignition temperature:	No information available.

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

Not oxidizing.

Vapour pressure:	not determined
Density (at 20 °C):	0,805 g/cm ³ DIN 51757
Bulk density:	No information available.
Water solubility:	insoluble



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Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:

No information available. DIN 53019-1

Viscosity / kinematic:
(at 40 °C)

No information available. DIN EN ISO 3104

Flow time:
(at 20 °C)

No information available. DIN EN ISO 2431

Vapour density:

not determined

Evaporation rate:

not determined

Solvent separation test:

No information available.

Solvent content:

No information available.

9.2. Other information

Solid content:

not determined

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

Flammable, Ignition hazard.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

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

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



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Acute toxicity

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
64742-48-9	Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates				
	oral	LD50 mg/kg	>8000	Rat	
	dermal	LD50 mg/kg	>3160	Rabbit	
	inhalative (4 h) vapour	LC50	4951 mg/l	Rat	
78-83-1	2-methylpropan-1-ol; iso-butanol				
	oral	LD50 mg/kg	> 2830	Rat	
	dermal	LD50 mg/kg	> 2000	Rat	
	inhalative (4 h) vapour	LC50	> 24 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		
128-37-0	2,6-di-tert-butyl-p-cresol				
	oral	LD50	2930 mg/kg	Rat	
	dermal	LD50 mg/kg	>2000	Rat	

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

STOT-single exposure

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

Severe effects after repeated or prolonged exposure

Repeated exposure may cause skin dryness or cracking.

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.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].



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

Harmful 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, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates					
	Acute fish toxicity	LC50	>1000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	>1000 mg/l	96 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50	>1000 mg/l	48 h	Daphnia magna	
78-83-1	2-methylpropan-1-ol; iso-butanol					
	Acute fish toxicity	LC50	1430 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50	1250 mg/l		Desmodesmus subspicatus	
	Acute crustacea toxicity	EC50	1439 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	
128-37-0	2,6-di-tert-butyl-p-cresol					
	Acute fish toxicity	LC50	0,42 mg/l	96 h	Brachydanio rerio (zebra-fish)	
	Acute algae toxicity	ErC50	0,42 mg/l	72 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50	0,57 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
78-83-1	2-methylpropan-1-ol; iso-butanol	0,79
27247-96-7	2-Ethylhexyl nitrate	3,74 - 5,24

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of


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waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; 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

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

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

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol; iso-butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640E
Limited quantity:	5 L
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Other applicable information (land transport)

Limited quantity: E1

Inland waterways transport (ADN)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol; iso-butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640E
Limited quantity:	5 L

Other applicable information (inland waterways transport)

Limited quantity: E1

Marine transport (IMDG)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol; iso-butanol)



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14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Marine pollutant:	No
Special Provisions:	223, 274, 955
Limited quantity:	5 L
EmS:	F-E, S-E

Other applicable information (marine transport)

Limited quantity: E1

Air transport (ICAO)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol; iso-butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Special Provisions:	A3
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

Other applicable information (air transport)

Limited quantity: E1

Passenger-LQ: Y344

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

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): EU 95,798 CH 88,097

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information


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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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant R phrases (number and full text)

10	Flammable.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
36	Irritating to eyes.
37/38	Irritating to respiratory system and skin.
41	Risk of serious damage to eyes.
44	Risk of explosion if heated under confinement.
50	Very toxic to aquatic organisms.
51	Toxic to aquatic organisms.
52/53	Harmful 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.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful 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 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.)