

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL Metallic Spray

Revision date: 13.01.2021

Product code: 21705

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

DINITROL Metallic Spray

UFI: YG3X-V14Y-Q00T-E0PA

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

Use of the substance/mixture

Anti-corrosive coating

Uses advised against

No further relevant information available.

1.3. Details of the supplier of the safety data sheet

Company name:	DINOL GmbH	
Street:	Pyrmonter Strasse 76	
Place:	D-32676 Luegde	
Telephone:	+ 49 (0) 5281 982980	Telefax: + 49 (0) 5281 9829860
e-mail:	msds@dinol.com	
Contact person:	Labor	
Responsible Department:	msds@dinol.com	

1.4. Emergency telephone number:

Giftnotruf Berlin: +49 30 30686 700 (Beratung in Deutsch und Englisch)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Aerosol: Aerosol 1

Aspiration hazard: Asp. Tox. 1

Skin corrosion/irritation: Skin Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause drowsiness or dizziness.

Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Signal word: Danger

Pictograms:



Hazard statements

H222 Extremely flammable aerosol.

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H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H304	May be fatal if swallowed and enters airways.
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.
P251	Do not pierce or burn, even after use.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	GHS Classification	
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	35 - < 40 %
	927-510-4	649-328-00-1
	01-2119475515-33	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411	
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	15 - < 20 %
	919-857-5	649-327-00-6
	01-2119463258-33	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066	
74-98-6	propane	10 - < 15 %
	200-827-9	01-2119486944-21
	Flam. Gas 1A, Compressed gas; H220 H280	
106-97-8	n-butane	10 - < 15 %
	203-448-7	01-2119474691-32
	Flam. Gas 1A, Compressed gas, Acute Tox. 3; H220 H280 H331	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64742-49-0	927-510-4	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	35 - < 40 %
		inhalation: LC50 = > 23.3 mg/l (vapours); dermal: LD50 = >2920 mg/kg; oral: LD50 = >5840 mg/kg	
106-97-8	203-448-7	n-butane	10 - < 15 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); inhalation: LC50 = 658 ppm (gases)	

Further Information

Hydrocarbons meet the requirements for not being classified as carcinogenic (<0,1% benzene alt<3% (w/w) DMSO extract (IP 346)).

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SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove contaminated, saturated clothing immediately.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary. If unconscious place in recovery position and seek medical advice.

After contact with skin

Wash with plenty of water/Soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Call a physician immediately. Do NOT induce vomiting.

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

No further relevant information available.

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

No further relevant information available.

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

No further relevant information available.

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****General measures**

Remove all sources of ignition. 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. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the

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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

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

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can form explosive mixtures with air.

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 exhaust 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.

Hints on joint storage

Not required.

Further information on storage conditions

Keep container tightly closed.

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics			
Consumer DNEL, long-term		oral	systemic	149 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	149 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2085 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	477 mg/m ³
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			

8.2. Exposure controls

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Appropriate engineering controls

Provide adequate ventilation.

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Protective and hygiene measures

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated, saturated clothing immediately. 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

Eye glasses with side protection (DIN EN 166)

Hand protection

Recommended glove articles :

FKM (fluoro rubber), Breakthrough time (maximum wearing time): 480 min.

NBR (Nitrile rubber), Breakthrough time (maximum wearing time): 480 min.

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.

Protective gloves have to be replaced at the first sign of deterioration.

Protect skin by using skin protective cream.

Skin protection

Wear anti-static footwear and clothing

Respiratory protection

Work in well-ventilated zones or use proper respiratory protection.

gas filtering equipment (EN 141), Filter material/medium: AX

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	bronze
Odour:	characteristic
Odour threshold:	not determined

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	not determined
Boiling point or initial boiling point and boiling range:	-44 °C
Flash point:	< - 20 °C
Sustaining combustion:	No data available

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

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Explosive properties

not determined

Lower explosion limits: 0,6 vol. %

Upper explosion limits: 10,9 vol. %

Auto-ignition temperature: > 200 °C

Self-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure: 8300 hPa

(at 20 °C)

Density (at 20 °C): 0,752 g/cm³ DIN 51757

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Relative vapour density: not determined

Evaporation rate: not determined

Solvent separation test: not determined

Solvent content: 68,9 %

9.2. Other information

Solid content: 30,1%

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

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

No further relevant information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon monoxide

SECTION 11: Toxicological information

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11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix calculated

ATE (inhalation vapour) 12,50 mg/l; ATE (inhalation aerosol) 2,083 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics				
	oral	LD50 >5840 mg/kg	Rat		
	dermal	LD50 >2920 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 > 23.3 mg/l	Rat		
106-97-8	n-butane				
	inhalation vapour	ATE 3 mg/l			
	inhalation aerosol	ATE 0,5 mg/l			
	inhalation (4 h) gas	LC50 658 ppm	Rat		

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Further information

There are no data available on the preparation/mixture itself.

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	Dose	[h] [d]	Species	Source	Method
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics					
	Acute fish toxicity	LL50 < 13,4 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 10-30 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 3 mg/l	48 h	Daphnia magna (Big water flea)		

12.2. Persistence and degradability

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No further relevant information available.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics		80%		
		Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

No further relevant information available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
74-98-6	propane	2,36

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

not applicable

12.7. Other adverse effects

No further relevant information available.

Further information

No further relevant information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Do not mix with other wastes.

List of proposed waste codes/waste designations in accordance with EWC:

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - 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; hazardous waste

Contaminated packaging

Remove according to the regulations.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

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Classification code: 5F
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 2
 Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Marine pollutant: yes
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Limited quantity Passenger: 30 kg G
 Passenger LQ: Y203
 Excepted quantity: E0
 IATA-packing instructions - Passenger: 203
 IATA-max. quantity - Passenger: 75 kg
 IATA-packing instructions - Cargo: 203

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IATA-max. quantity - Cargo:

150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance:

Hydrocarbons, aliphatic

14.6. Special precautions for user

Warning gas

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1litre: Category A.

For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS:

Category C, Clear of living quarters.

SG69 For AEROSOLS with a maximum capacity of 1 litre:

Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.

For AEROSOLS with a capacity above 1 litre:

Segregation as for the appropriate subdivision of class 2.

For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 29, Entry 40

2004/42/EC (VOC): 68,89 %
518,1 g/l

Additional information

Observe in addition any national regulations!

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles 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 hazard class (D):

2 - obviously hazardous to water

Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

Additional information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

SECTION 16: Other information

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)

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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%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Asp. Tox. 1; H304	Calculation method
Skin Irrit. 2; H315	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H220 Extremely flammable gas.
 H222 Extremely flammable aerosol.
 H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H229 Pressurised container: May burst if heated.
 H280 Contains gas under pressure; may explode if heated.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H331 Toxic if inhaled.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.
 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.)