

Material Safety Data Sheet

According to 91/155 EEC

Printing date 14.07.2004

Reviewed on 14.07.2004

* 1 Identification of the substance/preparation and of the company/undertaking

· **Product details**






- **Trade name:** DINITROL 4010 AEROSOL
- **Application of the substance / the preparation** Anticorrosion additive
- **Manufacturer/Supplier:** DINOL AB Spangatan 3 Box 149 S-28122 Hässleholm
- **Further information obtainable from:** Tel. +46 451 880 00, FAX +46 451 880 44
- **Information in case of emergency:** 020-996000 (ECR Nr. Nat.) +46 8 337 043 (ERC Nr. Int.)

* 2 Composition/information on ingredients

· **Chemical characterization**

· **Description:** Hydrocarbon solvent based corrosion rust preventive.

· **Dangerous components:**

CAS: 106-97-8 EINECS: 203-448-7	butane  F+; R 12	10-25%
	Naphtha (petroleum), hydrodesulfurized heavy, cas nr 64742-82-1  Xn,  N; R 10-51/53-65-66-67	10-25%
	Naphtha (petroleum), hydrotreated heavy, cas nr 64742-48-9 Aromatic content < 0,5 vol %  Xn; R 10-65-66	5-10%
	Naphtha (petroleum) hydrotreated heavy, cas nr 64742-48-9  Xn; R 10-65-66-67	5-10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

· **Hazard description:**

F+ Extremely flammable

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Warning! Pressurized container.

Has a narcotizing effect.

R 12 Extremely flammable.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

Buildup of explosive mixtures possible without sufficient ventilation.

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Keep out of the reach of children

· Classification system:

The classification of the product is based on Annex 1 of the substance directive (67/548/EEG) and ATP28.

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· Additional information:

Classification with R65 is not required since the product is an aerosol.

The petroleum naphtha / petroleum distillate / lubricating oil meet the requirements for not being classified as carcinogenic (<0,1% benzene alt<3% (w/w) DMSO extract (IP 346)).

* **4 First-aid measures**

- After inhalation: Take affected persons into fresh air and keep quiet.*
- After skin contact: Remove contaminated clothing. Wash skin with soap and water.*
- After eye contact: Rinse opened eye for several minutes under running water.*
- After swallowing: Give vegetable oil or cream.*

* **5 Fire-fighting measures**

- Suitable extinguishing agents:**
 - Carbon dioxide*
 - Fire-extinguishing powder*
 - Foam*
- For safety reasons unsuitable extinguishing agents:** *Water with full jet*
- Protective equipment:** *No special measures required.*
- Additional information** *Cool endangered receptacles with water spray.*

* **6 Accidental release measures**

- Person-related safety precautions:** *Wear protective equipment. Keep unprotected persons away.*
- Measures for environmental protection:**
 - Do not allow product to reach sewage system or any water course.*
 - Inform respective authorities in case of seepage into water course or sewage system.*
 - Do not allow to enter sewers/ surface or ground water.*
- Measures for cleaning/collecting:** *Ensure adequate ventilation.*
- Additional information:** *See Section 13 for disposal information.*

* **7 Handling and storage**

- Handling:**
- Information for safe handling:**
 - No special measures required.*
 - Ensure good ventilation/exhaustion at the workplace.*
 - Open and handle receptacle with care.*
- Information about fire - and explosion protection:**
 - Do not spray onto a naked flame or any incandescent material.*
 - Keep ignition sources away - Do not smoke.*
 - Protect against electrostatic charges.*
 - Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.*

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- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

74-98-6 propane

OES Asphyxiant

106-97-8 butane

OES Short-term value: 1810 mg/m³, 750 ppmLong-term value: 1450 mg/m³, 600 ppmNaphtha (petroleum), hydrodesulfurized heavy,
cas nr 64742-82-1OEL Short-term value: 1000 mg/m³

Naphtha (petroleum), hydrotreated heavy, cas nr 64742-48-9

Aromatic content < 0,5 vol %

OEL Long-term value: 1000 mg/m³

Naphtha (petroleum) hydrotreated heavy, cas nr 64742-48-9

OEL Long-term value: 1000 mg/m³

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:** Not required.

- **Material of gloves**

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form: Fluid
Colour: Colourless
Odour: Solvent-like

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower: 0.6 Vol %
Upper: 10.9 Vol %

· **Density at 23°C:** 0.89 g/cm³

· Solubility in / Miscibility with

water: Not miscible or difficult to mix.

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values relevant for classification:

Naphtha (petroleum) hydrotreated heavy, cas nr 64742-48-9

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

Naphtha (petroleum), hydrodesulfurized heavy, cas nr 64742-82-1

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4h	>5000 ppm (rat)

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· **Primary irritant effect:**

· **on the skin:**

Degreases the skin which with long or often repeated contact may cause reddening and sometimes eczema. In combination with bad personal hygiene, it may cause dermatitis, oil acne or other skin changes.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Inhalation:**

May cause headache, dizziness, tiredness and indisposition. At high concentrations reaction time and memory may deteriorate and unconsciousness may occur. Long or often repeated inhalation of high concentrations may cause permanent damage to the nervous system.

· **Ingestion:**

May cause similar symptoms as for inhalation.

Risk of chemical pneumonia if the product reaches the lungs at vomiting or similar.

12 Ecological information

· **Information about elimination (persistence and degradability):**

Naphtha (petroleum), hydrodesulfurized heavy, cas nr 64742-82-1

BOD28/COD	75 % (-)
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· **Other information:** The product is biodegradable.

· **Ecotoxic effects:**

· **Aquatic toxicity:**

Naphtha (petroleum) hydrotreated heavy, cas nr 64742-48-9

EC50	10-100 mg/l (bak)
	10-100 mg/l (daphnia)

IC50	10-100 mg/l (alga)
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LC50	10-100 mg/l (fish)
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Naphtha (petroleum), hydrodesulfurized heavy, cas nr 64742-82-1

LC50	1-100 mg/l (-)
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log Pow	>3 (-)
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· **Remark:**

The solvent can be bioaccumulated.

Harmful to fish

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

13 Disposal considerations

· **Product:**

· **Recommendation** Dispose of in accordance with Local Authority requirements

· **European waste catalogue**

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
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07 07 00	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
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07 07 99 wastes not otherwise specified

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Land transport ADR/RID (cross-border)



- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** 23
- **UN-Number:** 1950
- **Packaging group:** II
- **Hazard label** 2.1
- **Description of goods:** 1950 AEROSOLS
- **Remarks:** The product is classified as limited quantities according to ADR regulations when delivered in packaging of max 1000 ml or as aerosols.

· Maritime transport IMDG:



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Packaging group:** II
- **EMS Number:** F-D,S-U
- **Marine pollutant:** Yes
- **Proper shipping name:** AEROSOLS

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Packaging group:** II
- **Proper shipping name:** AEROSOLS, flammable

15 Regulatory information

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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· **Code letter and hazard designation of product:**



F+ Extremely flammable

· **Risk phrases:**

- 12 Extremely flammable.
 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 66 Repeated exposure may cause skin dryness or cracking.
 67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

- 2 Keep out of the reach of children.
 9 Keep container in a well-ventilated place.
 16 Keep away from sources of ignition - No smoking.
 29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
 46 If swallowed, seek medical advice immediately and show this container or label.
 51 Use only in well-ventilated areas.

· **Special labelling of certain preparations:**

Contains 2-butanone oxime. May produce an allergic reaction.
 Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
 Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
 Buildup of explosive mixtures possible without sufficient ventilation.
 Keep out of the reach of children

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **Technical instructions (air):**

Class	Share in %
III	25-50

· **EU-VOC:** 66.42 %

16 Other information

The information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our product from the point of view of safety requirements and is not intended to guarantee any particular property.
 Aerosol, contains 20-30% propane/butane as propellant.

· **Relevant R-phrases**

- 10 Flammable.
 12 Extremely flammable.
 51/53 Toxic to aquatic organisms, 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.

· **Department issuing MSDS:** Q&E Department

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- **Contact: Lena Almestrand**
- *** Data compared to the previous version altered.**

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