



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

- **Product details**
- **Trade name:** Dinitrol 4010 Spray
- **Application of the substance / the preparation** Anticorrosion additive
- **Manufacturer/Supplier:**
Dinol GmbH
Pyrmonter Strasse 76
D-32676 Lügde
Tel: +49 5281 9829 80
Fax: +49 5281 9829 860
E-mail: thomas.suerig@dinol.com
- **Further information obtainable from:** Research & Development
- **Information in case of emergency:**
Giftnotruf Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.

2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 F+; Extremely flammable
R12: Extremely flammable.
R52/53-66-67: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
 - **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.
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
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- **Label elements**
 - **Labelling according to EU guidelines:**
The product has been marked in accordance with EU Directives / respective national laws.
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
The R and S phrases may be omitted if packaging contains no more than 0.125 litre.
 - **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.
3 Keep in a cool place.
16 Keep away from sources of ignition - No smoking.

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- 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
- 51 Use only in well-ventilated areas.
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

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.

Buildup of explosive mixtures possible without sufficient ventilation.

Classification in accordance with Directive 75/324/EEC: Extremely flammable

Additional information:














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)).

3 Composition/information on ingredients

Chemical characterization

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 74-98-6 EINECS: 200-827-9	Propane liquefied  F+ R12	10-<25%
CAS: 106-97-8 EINECS: 203-448-7	Butane, pure  F+ R12	10-<25%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy  Xn R65 R10-66	10-<25%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy  Xn R65;  N R51/53 R10-66-67	10-<25%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy  Xn R65	5-<10%
CAS: 64742-49-0 EINECS: 265-151-9	Naphtha (petroleum), hydrotreated light  Xn R65;  Xi R38;  F R11;  N R51/53 R67	1-<5%
CAS: 96-29-7 EINECS: 202-496-6	2-Butanone oxime  Xn R21-40;  Xi R41;  Xi R43 Carc. Cat. 3	<1%

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

4 First aid measures

- After skin contact:** Generally the product does not irritate the skin.
- After eye contact:** Rinse opened eye for several minutes under running water.

5 Firefighting measures

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

Protective equipment: No special measures required.

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6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
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.
Absorb liquid components with liquid-binding material.

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:**
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.
- **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:**

106-97-8 Butane, pure (10-<25%)

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1,3-diene)
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- **CAS No. Designation of material % Type Value Unit**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.
Use suitable respiratory protective device in case of insufficient ventilation.

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· **Protection of hands:**

Protective gloves

· **Material of gloves**

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.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **General Information**· **Appearance:**

Form:	Aerosol
Colour:	Light brown
Odour:	Characteristic

· **Change in condition**

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

· **Flash point:** < -20°C (DIN 53213)

· **Ignition temperature:** 200°C

· **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 %

· **Vapour pressure At 20°C:** 4500 hPa

· **Density At 20°C:** 0.736 g/cm³ (DIN 51757)

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **Solvent content:**

Organic solvents: 63.9 %

Solids content: 30.0 % (DIN 53216)

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **Materials to be avoided:**
- **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:**

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

Oral	LD50	>5000 mg/kg (RAT)
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Dermal	LD50	>3000 mg/kg (RAT)
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64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy

Oral	LD50	>5000 mg/kg (RAT)
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Dermal	LD50	>3000 mg/kg (RABBIT)
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Inhalative	LC50/4 h	>2.8 mg/l (RAT)
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64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg (rat)
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Dermal	LD50	>3000 mg/kg (rab)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **Additional ecological information:**

- **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**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
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16 05 00	gases in pressure containers and discarded chemicals
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16 05 04*	gases in pressure containers (including halons) containing dangerous substances
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label** 2.1
- **Description of goods:** 1950 AEROSOLS
- **Limited quantities (LQ) LQ2**
- **Transport category** 2
- **Tunnel restriction code** D

· **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



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

15 Regulatory information

· **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
I	0.1
NK	69.9

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R21 Harmful in contact with skin.
- R38 Irritating to skin.
- R40 Limited evidence of a carcinogenic effect.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R65 Harmful: may cause lung damage if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:** Research & Development

· **Contact:** Dr. Thomas Sürig

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