


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

- **Product identifier**
- **Trade name:** *DINITROL 485 SPRAY*
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** *Corrosion inhibitors*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*DINOL GmbH
 Pyrmonter Str. 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*
- **Emergency telephone number:** *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.
-
- **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.
23 Do not breathe fumes/aerosol.
51 Use only in well-ventilated areas.

Trade name: DINITROL 485 SPRAY

(Contd. of page 1)

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

· Special labelling of certain preparations:

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.

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

· **Other hazards**

The petroleum naphtha / petroleum distillate / lubricating oil meet the requirements for not being classified as carcinogenic (<0.1% Benzene alt<3% (w/w) DMSO-extrakt (IP 346))

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 64742-49-0 EINECS: 265-151-9	Naphtha (petroleum), hydrotreated light Xn R65 R10-66-67	25-<50%
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: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy Xn R65 R10	1-<5%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy Xn R65; N R51/53 R10-66-67	1-<5%

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

4 First aid measures

· **Description of first aid measures**

· **After skin contact:** If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:**

Water

(Contd. on page 3)

Trade name: DINITROL 485 SPRAY

(Contd. of page 2)

- Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Absorb liquid components with liquid-binding material.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
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.
- **Conditions for safe storage, including any incompatibilities**
- **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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

· **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)
-----	---

(Contd. on page 4)

Trade name: DINITROL 485 SPRAY

(Contd. of page 3)

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· **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.

· **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

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Aerosol

Colour: Transparent

· **Odour:** Solvent-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: -44°C

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

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 200°C

· **Decomposition temperature:** Not determined.

· **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 %

(Contd. on page 5)

Trade name: DINITROL 485 SPRAY

(Contd. of page 4)

Upper:	10.9 Vol %
· Vapour pressure At 20°C:	4500 hPa
· Density At 20°C:	0.69 g/cm ³ (DIN 51757)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	83.2 %
Solids content:	16.8 % (DIN 53216)
· Other information	No further relevant information available.
· VOC (EU):	83.51 %
· VOC (EU):	576.2 g/l
· VOCV:	83.51 %

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

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

Oral	LD50	>5000 mg/kg (RAT)
------	------	-------------------

Dermal	LD50	>3000 mg/kg (RAT)
--------	------	-------------------

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

Oral	LD50	>5000 mg/kg (RAT)
------	------	-------------------

Dermal	LD50	>3000 mg/kg (RABBIT)
--------	------	----------------------

Inhalative	LC50/4 h	>2.8 mg/l (RAT)
------------	----------	-----------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

Trade name: DINITROL 485 SPRAY

(Contd. of page 5)

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **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
16 05 00	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing dangerous substances

- **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):** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label** 2.1
- **UN proper shipping name:** 1950 AEROSOLS
- **Limited quantities (LQ)** 1L
- **Transport category** 2

(Contd. on page 7)

Trade name: DINITROL 485 SPRAY

(Contd. of page 6)

· **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

· **Special precautions for user** Warning: Gases.
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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.
 23 Do not breathe fumes/aerosol.
 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:**
 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.

(Contd. on page 8)

Trade name: DINITROL 485 SPRAY

(Contd. of page 7)

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

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	83.5

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

· **Please note:** 3-1

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

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.

R12 Extremely flammable.

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