

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

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

- **1.1 Product identifier**
- **Trade name: Dinitrol 77B**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Technical function** Corrosion inhibitor
- **Application of the substance / the mixture** Anticorrosion additive
- **1.3 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: msds@dinol.com
- **Further information obtainable from:** Research & Development
- **1.4 Emergency telephone number:**
Giftnotruf Berlin +49(0)30 30686 700 Beratung in Deutsch und Englisch.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 3 H226 Flammable liquid and vapour.



STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Naphtha (petroleum), hydrotreated heavy
- **Hazard statements**
H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 1)

Precautionary statements

- P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*
- P243 *Take precautionary measures against static discharge.*
- P280 *Wear protective gloves/protective clothing/eye protection/face protection.*
- P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 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 extract (IP 346)).

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

Dangerous components:

CAS: 64742-48-9 EC number: 919-857-5 Reg.nr.: 01-2119463258-33	Naphtha (petroleum), hydrotreated heavy ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ STOT SE 3, H336	25-<50%
CAS: 25307-17-9 EINECS: 246-807-3 Reg.nr.: 01-2119510876-35	Bis(2-hydroxyethyl) oleylamine ⚠ Skin Corr. 1B, H314; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	<1%

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

SECTION 4: First aid measures

4.1 Description of first aid measures

 · **General information:** Immediately remove any clothing soiled by the product.

After skin contact:

Immediately rinse with water.

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.

 · **After swallowing:** Wash out mouth with water. Contact a physician.

 · **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.

GB

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 2)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **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
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 3)

· **8.1 Control parameters**

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

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

Oral	Long-term - systemic effects, general population	125 mg/kg bw/day (General Population)
Dermal	Long-term - systemic effects, worker	208 mg/kg bw/day (Worker)
	Long-term - systemic effects, general population	125 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, worker	871 mg/m ³ (Worker)
	Long-term - systemic effects, general population	185 mg/m ³ (General Population)

CAS: 25307-17-9 Bis(2-hydroxyethyl) oleylamine

Oral	Long-term - systemic effects, general population	0.179 mg/kg bw/day (General Population)
Dermal	Long-term - systemic effects, worker	0.25 mg/kg bw/day (Worker)
	Long-term - systemic effects, general population	0.179 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, worker	1.76 mg/m ³ (Worker)
	Long-term - systemic effects, general population	0.621 mg/m ³ (General Population)

· **PNECs**

CAS: 25307-17-9 Bis(2-hydroxyethyl) oleylamine

Aquatic compartment - freshwater	0.000214 mg/L (not specified)
Aquatic compartment - marine water	0.000021 mg/L (not specified)
Aquatic compartment - sediment in freshwater	1,692 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	0.1692 mg/kg sed dw (not specified)
Terrestrial compartment - soil	5 mg/kg dw (not specified)
Sewage treatment plant	1.5 mg/L (not specified)

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

· **Respiratory protection:**



Filter A

· **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.

Nitrile rubber

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 4)

Recommended thickness of the material: $\geq 0,12$ mm

- **Penetration time of glove material**
> 480 min.

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

- **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Light brown
· Odour:	Characteristic
· Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	154-193 °C

- **Flash point:** 41 °C (DIN 53213)

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** >200 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower:	0.6 Vol %
Upper:	7 Vol %

- **Vapour pressure At 20 °C:** 3 hPa

- **Density At 20 °C:** 0.875 g/cm³ (DIN 51757)

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic At 20 °C: 120 s (DIN 53211/4)

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 5)

· Solvent content:	
Organic solvents:	39.9 %
Water:	0.0 %
Solids content: 56.6 % (DIN 53216)	
· 9.2 Other information	No further relevant information available.
· VOC (EU):	39.92 %
· VOC (EU):	349.3 g/l
· VOCV:	39.92 %

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

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

Oral	LD50	>5,000 mg/kg (RAT)
Dermal	LD50	>5,000 mg/kg (RABBIT)
Inhalative	LC50/4 h	5,000 mg/l (RAT)

CAS: 25307-17-9 Bis(2-hydroxyethyl) oleylamine

Oral	LD50	>300-2,000 mg/kg (RAT)
	LC50/96 h	>0.1-1 mg/l (Fish)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Prolonged or repeated contact with skin may cause slight irritation and/or reddening.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:** No further relevant information available.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 6)

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 25307-17-9 Bis(2-hydroxyethyl) oleylamine

EC50/48 h >0.01-1 mg/l (DAPHNIA MAGNA)

EC50/72 h >0.01-0.1 mg/l (SELENASTRUM CAPRICORNUTUM)

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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

Harmful to aquatic organisms

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

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

Dispose of as dangerous waste.

· **European waste catalogue**

08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

HP3 Flammable

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP14 Ecotoxic

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR/RID/ADN, IMDG, IATA**

UN1139

· **14.2 UN proper shipping name**

· **ADR/RID/ADN**

1139 COATING SOLUTION

· **IMDG, IATA**

COATING SOLUTION

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 7)

- 14.3 Transport hazard class(es)
- ADR/RID/ADN, IMDG, IATA



- Class 3 Flammable liquids.
- Label 3

- 14.4 Packing group III
- ADR/RID/ADN, IMDG, IATA

- 14.5 Environmental hazards:
- Marine pollutant: No

- 14.6 Special precautions for user Warning: Flammable liquids.
- Danger code (Kemler): 30
- EMS Number: 3-05
- Segregation groups Alkalis
- Stowage Category A

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

· Transport/Additional information:

- ADR/RID/ADN
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- Transport category 3
- Tunnel restriction code D/E

- IMDG
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation": UN 1139 COATING SOLUTION, 3, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS02 GHS07

- Signal word Warning

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

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Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 8)

· **Hazard-determining components of labelling:**

Naphtha (petroleum), hydrotreated heavy

· **Hazard statements**

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H412 Harmful 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.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category** P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	39.9

· **Waterhazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

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

SECTION 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**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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

· **Contact:** Kontakt: msds@dinol.com oder Tel.: 0049 (0)5281 982 980

· **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 Harmonised System of Classification and Labelling of Chemicals

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.11.2019

Version number 20

Revision: 30.10.2019

Trade name: Dinitrol 77B

(Contd. of page 9)

*EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 3: Flammable liquids – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Asp. Tox. 1: Aspiration hazard – Category 1**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3**** Data compared to the previous version altered.**

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