

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

- **1.1 Product identifier**
- **Trade name:** *DINITROL PENETRANT / 3650*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
*No further relevant information available.*
- **Application of the substance / the mixture** *Corrosion inhibitors*
- **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 790 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**



GHS02

*Flam. Liq. 3 H226 Flammable liquid and vapour.*



GHS08

*Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.*



GHS07

*Skin Sens. 1 H317 May cause an allergic skin reaction.*

*STOT SE 3 H336 May cause drowsiness or dizziness.*

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



*Xi; Sensitising*

*R43: May cause sensitisation by skin contact.*

*R10-66-67: Flammable. 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.*

*Has a narcotising effect.*

- **Classification system:**

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

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

*The product is classified and labelled according to the CLP regulation.*

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## · Hazard pictograms



GHS02 GHS07 GHS08

· Signal word *Danger*

## · Hazard-determining components of labelling:

Naphtha (petroleum), hydrotreated heavy

Calcium Sulfonate

Naphtha (petroleum), hydrotreated heavy

## · Hazard statements

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

## · Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/protective clothing/eye protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

P331 Do NOT induce vomiting.

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 (&lt;0,1% benzene alt&lt;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 Xn R65 R10-66-67 Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	50-<100%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy Xn R65 R10-66-67 Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	1-<5%
CAS: 61789-86-4	Calcium Sulfonate Xi R43 Skin Sens. 1, H317	1-<5%

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

## **SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
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:** Do not induce vomiting; call for medical help immediately.
- **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 agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**  
Water  
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.  
Avoid contact with skin, eyes and clothes.
- **6.2 Environmental precautions:** 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).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **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.

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- 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.
- **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

#### 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, general population	125 mg/kg bw/day (General population)
	Long-term - systemic effects, worker	208 mg/kg bw/day (Worker)
Inhalative	Long-term - systemic effects, worker	871 mg/m3 (Worker)

- **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.  
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**  
Short term filter device:



Filter AX

- **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  
Recommended thickness of the material:  $\geq 0.12$  mm
- **Penetration time of glove material**  
> 480 min.  
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

## SECTION 9: Physical and chemical properties

## · 9.1 Information on basic physical and chemical properties

## · General Information

## · Appearance:

Form:	Fluid
Colour:	Black
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not determined.

## · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	130 °C

· Flash point: 37 °C (DIN 53213)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: &gt; 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 %
Upper:	7.0 Vol %

· Vapour pressure At 20 °C: 3 hPa

· Density At 20 °C: 0.83 g/cm<sup>3</sup> (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 At 20 °C:	18 mPas
Kinematic:	Not determined.

## · Solvent content:

Organic solvents: 57.0 %

Solids content: 43.0 % (DIN 53216)

· 9.2 Other information: No further relevant information available.

· VOC (EU): 57.01 %

· VOC (EU): 473.2 g/l

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· VOCV: 57.01 %

## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **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:**

· **LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Inhalative	LC50/4 h	9459 mg/l
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**64742-48-9 Naphtha (petroleum), hydrotreated heavy**

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>5000 mg/kg (RABBIT)
Inhalative	LC50/4 h	> 4951 mg/l (RAT)

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

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RAT)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitisation:** Sensitisation possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant  
No further relevant information available.
- **Ingestion:** Risk of chemical pneumonia if the product reaches the lungs at vomiting or similar.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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# Safety data sheet

according to 1907/2006/EC, Article 31

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

## SECTION 14: Transport information

- |                                                                                       |                                                   |
|---------------------------------------------------------------------------------------|---------------------------------------------------|
| · <b>14.1 UN-Number</b>                                                               | UN1139                                            |
| · <b>ADR, IMDG, IATA</b>                                                              |                                                   |
| · <b>14.2 UN proper shipping name</b>                                                 | 1139 COATING SOLUTION, special provision 640E     |
| · <b>ADR</b>                                                                          | COATING SOLUTION                                  |
| · <b>IMDG, IATA</b>                                                                   |                                                   |
| · <b>14.3 Transport hazard class(es)</b>                                              |                                                   |
| · <b>ADR, IMDG, IATA</b>                                                              |                                                   |
|    |                                                   |
| · <b>Class</b>                                                                        | 3 Flammable liquids.                              |
| · <b>Label</b>                                                                        | 3                                                 |
| · <b>14.4 Packing group</b>                                                           | III                                               |
| · <b>ADR, IMDG, IATA</b>                                                              |                                                   |
| · <b>14.5 Environmental hazards:</b>                                                  |                                                   |
| · <b>Marine pollutant:</b>                                                            | No                                                |
| · <b>14.6 Special precautions for user</b>                                            | Warning: Flammable liquids.                       |
| · <b>Danger code (Kemler):</b>                                                        | 30                                                |
| · <b>EMS Number:</b>                                                                  | F-E,S-E                                           |
| · <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                   |
| · <b>Transport/Additional information:</b>                                            |                                                   |
| -----                                                                                 |                                                   |
| · <b>ADR</b>                                                                          |                                                   |
| · <b>Limited quantities (LQ)</b>                                                      | 5L                                                |
| · <b>Excepted quantities (EQ)</b>                                                     | Code: E1                                          |
|                                                                                       | Maximum net quantity per inner packaging: 30 ml   |
|                                                                                       | Maximum net quantity per outer packaging: 1000 ml |
| · <b>Transport category</b>                                                           | 3                                                 |
| · <b>Tunnel restriction code</b>                                                      | D/E                                               |
| -----                                                                                 |                                                   |
| · <b>IMDG</b>                                                                         |                                                   |
| · <b>Limited quantities (LQ)</b>                                                      | 5L                                                |
| · <b>Excepted quantities (EQ)</b>                                                     | Code: E1                                          |
|                                                                                       | Maximum net quantity per inner packaging: 30 ml   |
|                                                                                       | Maximum net quantity per outer packaging: 1000 ml |

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GB

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· **UN "Model Regulation":** *UN1139, COATING SOLUTION, special provision 640E, 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   GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Naphtha (petroleum), hydrotreated heavy*  
*Calcium Sulfonate*  
*Naphtha (petroleum), hydrotreated heavy*
- **Hazard statements**  
*H226 Flammable liquid and vapour.*  
*H317 May cause an allergic skin reaction.*  
*H336 May cause drowsiness or dizziness.*  
*H304 May be fatal if swallowed and enters airways.*
- **Precautionary statements**  
*P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*  
*P243 Take precautionary measures against static discharge.*  
*P280 Wear protective gloves/protective clothing/eye protection.*  
*P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*  
*P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
*P331 Do NOT induce vomiting.*  
*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.*

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
NK	57.0

- **Waterhazard class:** *Water hazard class 2 (Self-assessment): 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.*  
*H304 May be fatal if swallowed and enters airways.*  
*H317 May cause an allergic skin reaction.*

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*H336 May cause drowsiness or dizziness.*

*R10 Flammable.*

*R43 May cause sensitisation by skin contact.*

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

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*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*

*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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Flam. Liq. 3: Flammable liquids, Hazard Category 3*

*Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

*Asp. Tox. 1: Aspiration hazard, Hazard Category 1*