

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

- **1.1 Product identifier**
- **Trade name:** *DINITROL 4010*
- **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** *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 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

*STOT RE 1                      H372 Causes damage to organs through prolonged or repeated exposure.*



GHS07

*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



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Naphtha (petroleum), hydrotreated heavy*  
*Naphtha (petroleum), hydrodesulfurized heavy*  
*Naphtha (petroleum), hydrotreated heavy*
- **Hazard statements**  
*H226 Flammable liquid and vapour.*  
*H336 May cause drowsiness or dizziness.*

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*H372 Causes damage to organs through prolonged or repeated exposure.**H412 Harmful to aquatic life with long lasting effects.***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.**P303+P361+P353 IF ON SKIN (or hair): Remove/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.**EUH208 Contains Calcium Sulfonate, 2-Butanone oxime. May produce an allergic reaction.***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	10-<25%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy Flam. Liq. 3, H226; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	10-<25%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	5-<10%
CAS: 61789-86-4	Calcium Sulfonate Skin Sens. 1B, H317	5-<10%
CAS: 57855-77-3	Naphthalenesulfonic acid, dinonyl-, calcium salt Skin Irrit. 2, H315; Eye Irrit. 2, H319	1-<3%
CAS: 96-29-7 EINECS: 202-496-6 Reg.nr.: 01-2119539477-28	2-Butanone oxime Carc. 2, H351; Eye Dam. 1, H318; Acute Tox. 4, H312; Skin Sens. 1, H317	<1%

**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.*

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- **After eye contact:**  
*Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*
- **After swallowing:** *Seek medical treatment.*
- **4.2 Most important symptoms and effects, both acute and delayed**  
*Disorientation*  
*Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.*
- **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>, 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**  
*Ensure adequate ventilation*  
*Keep away from ignition sources.*  
*Wear protective equipment. Keep unprotected persons away.*  
*Avoid contact with skin, eyes and clothes.*
- **6.2 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.*
- **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.*
- **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.*

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## 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, 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 <sup>3</sup> (Worker)
	Long-term - systemic effects, general population	185 mg/m <sup>3</sup> (General Population)

· **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:**



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.

##### · **Eye protection:**



Tightly sealed goggles

##### · **Body protection:** Protective work clothing

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## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Liquid
Colour:	Light brown
· 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: 36 °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 %
Upper:	7.0 Vol %

· Vapour pressure At 20 °C: 4 hPa

· Density At 20 °C: 0.89 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:	Not determined.
Kinematic At 20 °C:	22 s (DIN 53211/4)

#### · Solvent content:

Organic solvents: 52.1 %

Solids content: 47.1 % (DIN 53216)

· 9.2 Other information: No further relevant information available.

· VOC (EU): 52.12 %

· VOC (EU): 463.9 g/l

· VOCV: 52.12 %

## 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.

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- **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:**

Inhalative	LC50/4 h	10500 mg/l (rat)
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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)

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

Oral	LD50	>6500 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RABBIT)

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

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

**96-29-7 2-Butanone oxime**

Oral	LD50	2528 mg/kg (rat)
Dermal	LD50	200-2000 mg/kg (rat)
Inhalative	LC50/4 h	>10.5 mg/l (rat)
	LC50/96 h	>100 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.
- **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.
- **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**  
Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:****96-29-7 2-Butanone oxime**

EC50/48 h	201 mg/l (DAPHNIA MAGNA)
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IC50/72 h 6.1 mg/l (SELENASTRUM CAPRICORNUTUM)

- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** There is no data available for the product.
- **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 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
- **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 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

- **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, special provision 640E
- **IMDG, IATA** COATING SOLUTION
- **14.3 Transport hazard class(es)**
- **ADR,RID,ADN, IMDG, IATA**
- 
- **Class** 3 Flammable liquids.
- **Label** 3
- **14.4 Packing group**
- **ADR,RID,ADN, IMDG, IATA** III

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· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	
· <b>Danger code (Kemler):</b>	Warning: Flammable liquids. 30
· <b>EMS Number:</b>	F-E, <u>S-E</u>
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	
Not applicable.	
· <b>Transport/Additional information:</b>	
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· <b>ADR/RID/ADN</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
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· <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
· <b>UN "Model Regulation":</b>	
UN 1139 COATING SOLUTION, SPECIAL PROVISION 640E, 3, III	

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## 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**



- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
Naphtha (petroleum), hydrotreated heavy  
Naphtha (petroleum), hydrodesulfurized heavy  
Naphtha (petroleum), hydrotreated heavy
- **Hazard statements**  
H226 Flammable liquid and vapour.  
H336 May cause drowsiness or dizziness.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.
- **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.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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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

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
I	0.1
NK	52.1

- **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.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

· **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  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 3: Flammable liquids, Hazard Category 3  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B  
Carc. 2: Carcinogenicity, Hazard Category 2

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*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*  
*STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1*  
*Asp. Tox. 1: Aspiration hazard, Hazard Category 1*  
*Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*  
*Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3*

· **\* Data compared to the previous version altered.**

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