




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

- **1.1 Product identifier**
- **Trade name:** *DINITROL 440 Droehnex hellgrau*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** *Coating material*
- **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 Directive 67/548/EEC or Directive 1999/45/EC**
-  **Xn; Harmful**
R48/20-63: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.
-  **Xi; Irritant**
R38: Irritating to skin.
-  **F; Highly flammable**
R11: Highly flammable.
R52/53-67: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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.
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.
- **2.2 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:**
*Xn Harmful
F Highly flammable*

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Trade name: DINITROL 440 Droehnex hellgrau

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

Toluene

· **Risk phrases:**

11 Highly flammable.

38 Irritating to skin.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

63 Possible risk of harm to the unborn child.

67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

23 Do not breathe vapour.

25 Avoid contact with eyes.

36/37 Wear suitable protective clothing and gloves.

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

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterization: Mixtures**

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

· **Dangerous components:**

CAS: 108-88-3 EINECS: 203-625-9	Toluene ☒ Xn R48/20-63-65; ☒ Xi R38; ☒ F R11 R67 Repr. Cat. 3 ----- ☒ Flam. Liq. 2, H225; ☒ Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; ☒ Skin Irrit. 2, H315; STOT SE 3, H336	25-<50%
CAS: 141-78-6 EINECS: 205-500-4	Ethyl acetate ☒ Xi R36; ☒ F R11 R66-67 ----- ☒ Flam. Liq. 2, H225; ☒ Eye Irrit. 2, H319; STOT SE 3, H336	5-<10%
CAS: 64742-82-1 EC number: 919-446-0	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) ☒ Xn R65; ☒ N R51/53 R10-66-67 ----- ☒ Flam. Liq. 3, H226; ☒ Asp. Tox. 1, H304; ☒ Aquatic Chronic 2, H411; ☒ STOT SE 3, H336	1-<5%
CAS: 1330-20-7 EINECS: 215-535-7	Xylene, mixed isomers, pure ☒ Xn R20/21; ☒ Xi R38 R10 ----- ☒ Flam. Liq. 3, H226; ☒ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	1-<5%

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

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Trade name: DINITROL 440 Droehnex hellgrau

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** 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.
- **4.2 Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
Dizziness
- **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, 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**
In case of fire, the following can be released:
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **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:**
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.
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.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **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:**

108-88-3 Toluene

WEL	Short-term value: 384 mg/m ³ , 100 ppm Long-term value: 191 mg/m ³ , 50 ppm Sk
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141-78-6 Ethyl acetate

WEL	Short-term value: 400 ppm Long-term value: 200 ppm
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1330-20-7 Xylene, mixed isomers, pure

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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· **DNELs**

108-88-3 Toluene

Oral	Long-term - systemic effects, general population	8.13 mg/kg bw/day (General Population)
Dermal	Long-term - systemic effects, worker	384 mg/kg bw/day (Worker)
Inhalative	Acute - Local effects, worker	384 mg/m ³ (Worker)
	Acute - local effects, general population	226 mg/m ³ (General Population)
	Acute - systemic effects, general population	226 mg/m ³ (General Population)
	Acute - systemic effect, worker	384 mg/m ³ (Worker)
	Long-term - local effects, worker	192 mg/m ³ (Worker)
	Long-term - systemic effects, general population	56.5 mg/m ³ (General Population)
	Long-term - systemic effects, worker	192 mg/m ³ (Worker)

· **PNECs**

108-88-3 Toluene

Aquatic compartment - freshwater	0.68 mg/L (not specified)
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Trade name: DINITROL 440 Droehnex hellgrau

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Aquatic compartment - sediment in freshwater	16.39 mg/kg sed dw (not specified)
Sewage treatment plant	13.61 mg/L (not specified)
Terrestrial compartment - soil	2.89 mg/kg dw (not specified)

· **Ingredients with biological limit values:**

1330-20-7 Xylene, mixed isomers, pure

BMGV	650 mmol/mol creatinine
	Medium: urine
	Sampling time: post shift
	Parameter: methyl hippuric acid

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the skin.
- Avoid close or long term contact with the skin.
- Avoid contact with the eyes and skin.

· **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.

Filter A/P2

· **Protection of hands:**



Protective gloves

· **Material of gloves**

PVA 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.

Fluorocarbon rubber (Viton)

· **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.

· **Not suitable are gloves made of the following materials:** Natural rubber

· **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:	Viscous
· Colour:	Light grey
· Odour:	Aromatic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	77 °C

· **Flash point:** -4 °C (DIN 53213)

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

· **Ignition temperature:** 485 °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:	1.3 Vol %
· Upper:	7.0 Vol %

· **Vapour pressure At 20 °C:** 30 hPa

· **Density At 20 °C:** 1.28 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 At 20 °C:	1500 mPas
· Kinematic:	Not determined.

· Solvent content:

· **Organic solvents:** 42.0 %

· **Solids content:** 58.0 % (DIN 53216)

· **9.2 Other information** No further relevant information available.

· **VOC (EU):** 42.00 %

· **VOC (EU):** 540.0 g/l

· **VOCV:** 42.00 %

Trade name: DINITROL 440 Droehnex hellgrau

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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:**

108-88-3 Toluene

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>5000 mg/kg (RABBIT)
Inhalative	LC50/4 h	>20 mg/l (RAT)
	LC50/96 h	13 mg/l (Fish)

141-78-6 Ethyl acetate

Oral	LD50	4935 mg/kg (RABBIT)
Inhalative	LC50/4 h	1600 mg/l (RAT)

64742-82-1 Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RABBIT)
Inhalative	LC50/4 h	>2.8 mg/l (RAT)

1330-20-7 Xylene, mixed isomers, pure

Oral	LD50	8700 mg/kg (RAT)
Dermal	LD50	2000 mg/kg (RABBIT)
Inhalative	LC50/4 h	6350 mg/l (RAT)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **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
- **Inhalation:** Irritating to respiratory tract.

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Trade name: DINITROL 440 Droehnex hellgrau

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

108-88-3 Toluene

EC50/48 h | 11.5 mg/l (DAPHNIA MAGNA)

IC50/72 h | 12 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.

· 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

15 00 00 | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED

15 01 00 | packaging (including separately collected municipal packaging waste)

15 01 10* | packaging containing residues of or contaminated by dangerous substances

· Uncleaned packaging:

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

SECTION 14: Transport information

· 14.1 UN-Number

· **ADR, IMDG, IATA**

UN1139

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Trade name: DINITROL 440 Droehnex hellgrau

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· **14.2 UN proper shipping name**
· **ADR** 1139 COATING SOLUTION, special provision 640H
· **IMDG, IATA** COATING SOLUTION

· **14.3 Transport hazard class(es)**
· **ADR, IMDG, IATA**



· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**
· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**
· **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Flammable liquids.
· **Danger code (Kemler):** 33
· **EMS Number:** F-E,S-E

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 5L
· **Transport category** 3
· **Tunnel restriction code** D/E

SECTION 15: Regulatory information

· **15.1 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:**

Xn Harmful

F Highly flammable

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

Toluene

· **Risk phrases:**

11 Highly flammable.

38 Irritating to skin.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

63 Possible risk of harm to the unborn child.

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Trade name: DINITROL 440 Droehnex hellgrau

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67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

23 Do not breathe vapour.

25 Avoid contact with eyes.

36/37 Wear suitable protective clothing and gloves.

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

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	43.0

· **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**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

R10 Flammable.

R11 Highly flammable.

R20/21 Harmful by inhalation and in contact with skin.

R36 Irritating to eyes.

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 Possible risk of harm to the unborn child.

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

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