



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

- **1.1 Product identifier**
- **Trade name:** *DINITROL 442 Pyrmotec 53 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*
R20/21: Harmful by inhalation and in contact with skin.
-  *Xi; Irritant*
R38: Irritating to skin.
- *R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
- **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.
- **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
- **Hazard-determining components of labelling:**
Xylene, mixed isomers, pure
- **Risk phrases:**
*10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*

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Trade name: DINITROL 442 Pyrmotec 53 hellgrau

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· **Safety phrases:**

- 9 Keep container in a well-ventilated place.
- 23 Do not breathe vapour/spray.
- 25 Avoid contact with eyes.
- 36/37 Wear suitable protective clothing and gloves.
- 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:**

Contains Fatty acids, tall-oil, compounds with oleylamine, Fatty acids, C18-unsatd., trimers, compds. with oleylamine. May produce an allergic reaction.

· **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: 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 | 25-<50% |
| CAS: 123-86-4 EINECS: 204-658-1 | n-Butyl acetate R10-66-67 ⚠ Flam. Liq. 3, H226; ⚠ 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 | 5-<10% |
| CAS: 108-65-6 EINECS: 203-603-9 | 2-methoxy-1-methylethyl acetate R10 ⚠ Flam. Liq. 3, H226; ⚠ Eye Irrit. 2, H319 | 1-<5% |
| CAS: 64742-95-6 EINECS: 265-199-0 | Solvent naphtha (petroleum), light arom. ☒ Xn R65; ☒ Xi R37; ☒ N R51/53 R10-66-67 ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336 | <1% |
| CAS: 147900-93-4 EC number: 604-612-4 | Fatty acids, C18-unsatd., trimers, compds. with oleylamine ☒ T R48/25; ☒ Xi R43; ☒ N R51/53 ⚠ STOT RE 1, H372; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Sens. 1, H317 | <1% |
| CAS: 85711-55-3 EINECS: 288-315-1 | Fatty acids, tall-oil, compounds with oleylamine ☒ Xi R43 ⚠ Skin Sens. 1, H317 | <1% |

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

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SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. 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:** 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:

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.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **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.
- **8.1 Control parameters**

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

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 |
|-----|--|

123-86-4 n-Butyl acetate

| | |
|-----|---|
| WEL | Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm |
|-----|---|

108-65-6 2-methoxy-1-methylethyl acetate

| | |
|-----|--|
| WEL | Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk |
|-----|--|

· **DNELs**

123-86-4 n-Butyl acetate

| | | |
|------------|--|---|
| Inhalative | Acute - Local effects, worker | 960 mg/m ³ (Worker) |
| | Acute - local effects, general population | 859.7 mg/m ³ (General Population) |
| | Acute - systemic effects, general population | 859.7 mg/m ³ (General Population) |
| | Acute - systemic effects, worker | 960 mg/m ³ (Worker) |
| | Long-term - local effects, general population | 102.34 mg/m ³ (General Population) |
| | Long-term - local effects, worker | 480 mg/m ³ (Worker) |
| | Long-term - systemic effects, general population | 102.34 mg/m ³ (General Population) |
| | Long-term - systemic effects, worker | 480 mg/m ³ (Worker) |

· **PNECs**

123-86-4 n-Butyl acetate

| | |
|------------------------------------|----------------------------|
| Aquatic compartment - freshwater | 0.18 mg/L (not specified) |
| Aquatic compartment - marine water | 0.018 mg/L (not specified) |

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| | |
|--|-------------------------------------|
| Aquatic compartment - sediment in freshwater | 0.981 mg/kg sed dw (not specified) |
| Aquatic compartment - sediment in marine water | 0.0981 mg/kg sed dw (not specified) |
| Aquatic compartment - water, intermittent releases | 0.36 mg/L (not specified) |
| Sewage treatment plant | 35.6 mg/L (not specified) |
| Terrestrial compartment - soil | 0.0903 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
- Strong material gloves

· **Eye protection:**



Tightly sealed goggles

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· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

| | |
|---------------------------|-----------------|
| · Form: | Viscous |
| · Colour: | Light grey |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |

· **pH-value:** Not determined.

· Change in condition

| | |
|---------------------------------------|---------------|
| · Melting point/Melting range: | Undetermined. |
| · Boiling point/Boiling range: | 124 °C |

· **Flash point:** 24 °C (DIN 53213)

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

· **Ignition temperature:** 210 °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: | 1.0 Vol % |
| · Upper: | 7.0 Vol % |

· **Vapour pressure At 20 °C:** 6 hPa

· **Density At 20 °C:** 1.19 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: | 1300 mPas |
| · Kinematic: | Not determined. |

· **Solvent separation test:** <3 %

· Solvent content:

· **Organic solvents:** 45.9 %

· **Solids content:** 54.0 % (DIN 53216)

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

· **VOC (EU):** 44.00 %

· **VOC (EU):** 525.0 g/l

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· **VOCV:** 44.00 %

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:**

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) |

123-86-4 n-Butyl acetate

| | | |
|------------|-----------|-------------------------------|
| Oral | LD50 | 10760 mg/kg (RAT) |
| Dermal | LD50 | >14000 mg/kg (RABBIT) |
| Inhalative | LC50/4 h | >20 mg/l (RAT) |
| | LC50/96 h | 18 mg/l (pimephales promelas) |

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) |

108-65-6 2-methoxy-1-methylethyl acetate

| | | |
|------------|----------|------------------|
| Oral | LD50 | 8500 mg/kg (rat) |
| Inhalative | LC50/4 h | 35.7 mg/l (rat) |

64742-95-6 Solvent naphtha (petroleum), light arom.

| | | |
|------------|----------|-------------------|
| Oral | LD50 | >6800 mg/kg (RAT) |
| Dermal | LD50 | >3400 mg/kg (RAT) |
| Inhalative | LC50/4 h | >10.2 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:

Harmful

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Trade name: DINITROL 442 Pyrmotec 53 hellgrau

Irritant

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

123-86-4 n-Butyl acetate

| | |
|-----------|-------------------------|
| EC50/48 h | 44 mg/l (DAPHNIA MAGNA) |
| EC50/72 h | 647.7 mg/l (ALGAE) |

· **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.


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SECTION 14: Transport information

| | |
|---|---|
| · 14.1 UN-Number · ADR, IMDG, IATA | UN1139 |
| · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1139 COATING SOLUTION, special provision 640E COATING SOLUTION |
| · 14.3 Transport hazard class(es) · ADR, IMDG, IATA |  |
| · Class · Label | 3 Flammable liquids. 3 |
| · 14.4 Packing group · ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: · Marine pollutant: | No |
| · 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: | Warning: Flammable liquids. 33 F-E, <u>S-E</u> |
| · 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) · Transport category · Tunnel restriction code | 5L 3 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
- Hazard-determining components of labelling:
Xylene, mixed isomers, pure
- Risk phrases:
10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.

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Trade name: DINITROL 442 Pyrmotec 53 hellgrau

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

· **Safety phrases:**

- 9 Keep container in a well-ventilated place.
- 23 Do not breathe vapour/spray.
- 25 Avoid contact with eyes.
- 36/37 Wear suitable protective clothing and gloves.
- 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:**

Contains Fatty acids, tall-oil, compounds with oleylamine, Fatty acids, C18-unsatd., trimers, compds. with oleylamine. May produce an allergic reaction.

· **National regulations:**

· **Technical instructions (air):**

| Class | Share in % |
|-------|------------|
| NK | 45.9 |

· **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.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H336 May cause drowsiness or dizziness.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- R10 Flammable.
- R20/21 Harmful by inhalation and in contact with skin.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.
- R43 May cause sensitisation by skin contact.
- R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.
- 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:** Kontakt: msds@dinol.com oder Tel.: 0049 (0)5281 982 980

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