

## 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** Dinitrol 353 Multi 2020 Spray
- **Application of the substance / the preparation** Lubricant
- **Manufacturer/Supplier:**  
Dinol GmbH  
Pyrmonter Strasse 76  
D-32676 Lügde  
Tel: +49 5281 9829 80  
Fax: +49 5281 9829 860  
E-mail: thomas.suerig@dinol.com
- **Further information obtainable from:** Research & Development
- **Information in case of emergency:** Giftnotruf Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.

## 2 Hazards identification

- **Hazard description:**



Xi Irritant  
F+ Extremely flammable  
N Dangerous for the 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.

Warning! Pressurized container.

Has a narcotizing effect.

R 12 Extremely flammable.

R 38 Irritating to skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

Buildup of explosive mixtures possible without sufficient ventilation.

Keep out of the reach of children

- **Classification system:**

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

- **Additional information:**

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)).

## 3 Composition/information on ingredients

- **Chemical characterization**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64742-49-0 EINECS: 265-151-9	Naphtha (petroleum), hydrotreated light Xn, Xi, F, N; R 11-38-51/53-65-67	10-<25%
CAS: 74-98-6 EINECS: 200-827-9	Propane liquefied F+; R 12	10-<25%

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CAS: 106-97-8 EINECS: 203-448-7	Butane, pure F+; R 12	10-<25%
CAS: 92062-15-2 EINECS: 295-529-9	Solvent naphtha (petroleum), hydrotreated light naphthenic Xn, Xi, F, N; R 11-38-51/53-65-67	10-<25%
CAS: 110-82-7 EINECS: 203-806-2	Cyclohexane Xn, Xi, F, N; R 11-38-50/53-65-67	5-<10%
CAS: 110-54-3 EINECS: 203-777-6	n-Hexane Xn, Xi, F, N; R 11-38-48/20-62-51/53-65-67	1-<5%

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

#### 4 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.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **Information for doctor:**
- **The following symptoms may occur:** Dizziness

#### 5 Fire-fighting measures

- **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
- **Protective equipment:** No special measures required.
- **Additional information:** Cool endangered receptacles with water spray.

#### 6 Accidental release measures

- **Person-related safety precautions:**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:**  
No special measures required.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.

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Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

· **Information about storage in one common storage facility: Not required.**

· **Further information about storage conditions:**

Keep container tightly sealed.

Do not seal receptacle gas tight.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

· **Maximum storage temperature: < 50 °C**

## 8 Exposure controls/personal protection

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

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

**106-97-8 Butane, pure (10-<25%)**

WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm

Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm

Carc (if more than 0.1% of buta-1.3-diene)

**110-82-7 Cyclohexane (5-<10%)**

WEL Short-term value: 1050 mg/m<sup>3</sup>, 300 ppm

Long-term value: 350 mg/m<sup>3</sup>, 100 ppm

**110-54-3 n-Hexane (1-<5%)**

WEL Long-term value: 72 mg/m<sup>3</sup>, 20 ppm

· **CAS No. Designation of material % Type Value Unit**

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

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

· **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.

· **Protection of hands:**



Protective gloves

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· **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.*

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· **Penetration time of glove material**

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

· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

*Neoprene gloves (0,47 mm)*

*Nitrile rubber*

· **For the permanent contact gloves made of the following materials are suitable: Neoprene gloves (0,47 mm)**

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

*Neoprene gloves (0,47 mm)*

· **As protection from splashes gloves made of the following materials are suitable: Neoprene gloves (0,47 mm)**

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

*Strong material gloves*

*Leather gloves*

· **Eye protection:**



*Tightly sealed goggles*

## 9 Physical and chemical properties

· **General Information**

**Form:** Aerosol  
**Colour:** Transparent  
**Odour:** Characteristic

· **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** Not applicable, as aerosol.

· **Flash point:** < -20°C (DIN 53213)

· **Ignition temperature:** 260°C

· **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:** 1.5 Vol %  
**Upper:** 10.9 Vol %

· **Vapour pressure At 20°C:** 4000 hPa

· **Density At 20°C:** 0.658 g/cm<sup>3</sup>

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· **Solubility in / Miscibility with water:** *Not miscible or difficult to mix.*

· **Solvent content:**  
**Organic solvents:** 72.2 %

**Solids content:** 27.8 % (DIN 53216)

· **Additional information:**  
**VOC (EU):** 72.20 %  
**VOC (EU):** 475.0 g/l

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Materials to be avoided:**
- **Dangerous reactions** *No dangerous reactions known.*
- **Dangerous decomposition products:** *No dangerous decomposition products known.*

### 11 Toxicological information

· **Acute toxicity:**

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

**64742-49-0 Naphtha (petroleum), hydrotreated light**

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>2600 mg/kg (RABBIT)
Inhalative	LC50/4 h	>193 mg/l (RAT)

**110-82-7 Cyclohexane**

Oral	LD50	12705 mg/kg (RAT)
Inhalative	LC 50	89600 mg/l (RABBIT)

- **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*

### 12 Ecological information

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

**64742-49-0 Naphtha (petroleum), hydrotreated light**

EC50/48 h	10 mg/l (PHAEOPHYTA)
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· **Remark:** *Toxic for fish*

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· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

**13 Disposal considerations**

· **Product:**

· **Recommendation**

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

· **European waste catalogue**

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 03 00	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 99	wastes not otherwise specified
16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 04	gases in pressure containers (including halons) containing 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.

**14 Transport information**

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 2 5F Gases.

· **Danger code (Kemler):** -

· **UN-Number:** 1950

· **Packaging group:** -

· **Hazard label** 2.1

· **Special marking:** Symbol (fish and tree)

· **Description of goods:** 1950 AEROSOLS

· **Limited quantities (LQ)** LQ2

· **Transport category** 2

· **Tunnel restriction code** D

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· **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** Yes  
Symbol (fish and tree)
- **Proper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable

· **Environmental hazards:** Product contains environmentally hazardous substances: Cyclohexane

**15 Regulatory information**

· **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:**



Xi Irritant  
F+ Extremely flammable  
N Dangerous for the environment

· **Risk phrases:**

12 Extremely flammable.

38 Irritating to skin.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

2 Keep out of the reach of children.

9 Keep container in a well-ventilated place.

23 Do not breathe fumes.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

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46 If swallowed, seek medical advice immediately and show this container or label.

51 Use only in well-ventilated areas.

· **Special labelling of certain preparations:**

*Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.*

*Do not spray on a naked flame or any incandescent material.*

*Buildup of explosive mixtures possible without sufficient ventilation.*

*Keep out of the reach of children*

· **Classification in accordance with Directive 75/324/EEC: Extremely flammable**

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	50-100

· **Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**

· **EU-VOC: 72.20 %**

## 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 R-phrases**

11 Highly flammable.

12 Extremely flammable.

38 Irritating to skin.

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

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

62 Possible risk of impaired fertility.

65 Harmful: may cause lung damage if swallowed.

67 Vapours may cause drowsiness and dizziness.

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

· **Contact: Dr. Thomas Sürig**

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