

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 1 of 12

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

1.1. Product identifier

DINITROL 353 Multi 2020 Spray

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Lubricating agent, Lubricants, greases, release products

1.3. Details of the supplier of the safety data sheet

Company name:	DINOL GmbH	
Street:	Pyrmonter Strasse 76	
Place:	D-32676 Luegde	
Telephone:	+49 (0) 5281 9829 80	Telefax: +49 (0) 5281 9829 860
Responsible Department:	msds@dinol.com	

1.4. Emergency telephone number: Giftnotruf Berlin: +49 30 30686 790 (Consultation in German and English)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Indications of danger: F+ - Extremely flammable, N - Dangerous for the environment
 R phrases:
 Extremely flammable.
 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 Repeated exposure may cause skin dryness or cracking.
 Vapours may cause drowsiness and dizziness.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:
 Aerosol: Aerosol 1
 Specific target organ toxicity - single exposure: STOT SE 3
 Hazardous to the aquatic environment: Aquatic Chronic 2
 Hazard Statements:
 Extremely flammable aerosol.
 Pressurised container: May burst if heated.
 May cause drowsiness or dizziness.
 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard components for labelling

pentane
 Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Signal word: Danger

Pictograms: GHS02-GHS07-GHS09



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 2 of 12

H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of this material and its container to hazardous or special waste collection point.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 3 of 12

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
203-692-4	pentane	25-50 %
109-66-0	F+ - Extremely flammable, Xn - Harmful, N - Dangerous for the environment R12-65-66-67-51-53	
601-006-00-1	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 EUH066	
01-2119459286-30		
200-827-9	propane	12,5-20 %
74-98-6	F+ - Extremely flammable R12	
601-003-00-5	Flam. Gas 1, Liquefied gas; H220 H280	
01-2119486944-21		
203-448-7	butane	5-10 %
106-97-8	F+ - Extremely flammable R12	
601-004-00-0	Flam. Gas 1, Liquefied gas; H220 H280	
01-2119474691-32		
200-857-2	isobutane	5-10 %
75-28-5	F+ - Extremely flammable R12	
601-004-00-0	Flam. Gas 1, Liquefied gas; H220 H280	
919-857-5	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	2,5-5 %
64742-48-9	Xn - Harmful R10-65-66-67	
649-327-00-6	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066	
01-2119463258-33		
279-632-6	Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	0,1-1 %
80939-62-4	Xi - Irritant, N - Dangerous for the environment R36/38-51-53	
	Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2; H315 H319 H411	
01-2119976322-36		

Full text of R, H and EUH phrases: see section 16.

Further Information

Note: Each entry in the column EC number that begins with the number "9" is - until the publication the official registration number - one specified by ECHA provisional number for the substance. The above-mentioned substance(s) in this product is (are) identified by CAS number and indeed in Countries that are not subject to the REACH Regulation, or in a regulation which is not in accordance with new naming convention for hydrocarbons have been updated.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air. In case of troubles or persistent symptoms, consult an ophthalmologist.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 4 of 12

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO₂), Extinguishing powder, Water fog.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

Take precautionary measures against static discharges.

Do not spray on naked flames or any incandescent material.

Keep away from sources of ignition. - No smoking.

Heating causes rise in pressure with risk of bursting.

7.2. Conditions for safe storage, including any incompatibilities

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 5 of 12

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.
Do not keep the container sealed. Keep container dry.
Keep away from heat. Protect against direct sunlight.

Advice on storage compatibility

No information available.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
109-66-0	Pentane	600	1800		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
109-66-0	pentane			
Worker DNEL, long-term		inhalation	systemic	3000 mg/m ³
Worker DNEL, long-term		dermal	systemic	432 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	643 mg/m ³
Consumer DNEL, long-term		dermal	systemic	214 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	214 mg/kg bw/day
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			
Worker DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1500 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	900 mg/m ³
Consumer DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	300 mg/kg bw/day

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 6 of 12

PNEC values

CAS No	Substance	Value
Environmental compartment		
109-66-0	pentane	
Freshwater		0,230 mg/l
Marine water		0,230 mg/l
Micro-organisms in sewage treatment plants (STP)		3,600 mg/l
Freshwater sediment		1,2 mg/kg
Marine sediment		1,2 mg/kg

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation.

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

Protective and hygiene measures

Keep away from food, drink and animal feedingstuffs.

When using do not eat or drink.

Wash hands before breaks and after work.

Avoid contact with skin and eyes.

Remove contaminated, saturated clothing immediately.

Eye/face protection

Eye glasses with side protection (DIN EN 166)

Hand protection

Tested protective gloves must be worn (DIN EN 374):

NBR (Nitrile rubber) , Breakthrough time (maximum wearing time): 240 min.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves have to be replaced at the first sign of deterioration.

Protect skin by using skin protective cream.

Skin protection

Wear anti-static footwear and clothing

Respiratory protection

Work in well-ventilated zones or use proper respiratory protection.

gas filtering equipment (EN 141)., Filter material/medium: AP/2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	translucent
Odour:	characteristic

Test method

pH-Value: not determined

Changes in the physical state

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 7 of 12

Melting point: not determined
Initial boiling point and boiling range: not applicable
Flash point: < 0 °C

Flammability

Solid: not applicable
Gas: not applicable

Explosive properties

not determined

Lower explosion limits: 1,4 vol. %
Upper explosion limits: 10,9 vol. %
Ignition temperature: 240 °C

Auto-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: 3500 hPa
(at 20 °C)Density (at 20 °C): 0,68 g/cm³

Water solubility: insoluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Vapour density: not determined

Evaporation rate: not determined

Solvent content: 64,2 %

9.2. Other information

Solid content: 35,8 %

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 8 of 12

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
109-66-0	pentane				
	oral	LD50	>2000 mg/kg	Rat	
	inhalative (4 h) vapour	LC50	> 25,3 mg/l	Rat	
106-97-8	butane				
	inhalative (4 h) gas	LC50	273000 ppm	Rat	GESTIS
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics				
	oral	LD50	>5000 mg/kg	Rat	
	dermal	LD50	>5000 mg/kg	Rabbit	
	inhalative (4 h) vapour	LC50	>4951 mg/l	Rat	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (pentane), (Hydrocarbons, C9-C 11, n-alkanes, isoalkanes, cyclics, <2% aromatics)

Severe effects after repeated or prolonged exposure

Repeated exposure may cause skin dryness or cracking.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 9 of 12

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
109-66-0	pentane					
	Acute crustacea toxicity	EC50	9,74 mg/l	48 h	Daphnia magna	IUCLID
80939-62-4	Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates					
	Acute crustacea toxicity	EC50	1,2 mg/l	48 h	Daphnia magna (Big water flea)	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics				
		80%			
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
109-66-0	pentane	3,39
74-98-6	propane	2,36
106-97-8	butane	2,89
75-28-5	isobutane	2,8

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

not applicable

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation. Do not mix with other wastes.

List of proposed waste codes/waste designations in accordance with EWC:

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 10 of 12

Contaminated packaging

Remove according to the regulations.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1



Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Marine transport (IMDG)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS (Pentane, Amines, C11-14-branched alkyl, monoethyl and diethyl phosphates), MARINE POLLUTANT
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1



Marine pollutant:	yes
Special Provisions:	63, 190, 277, 327, 344, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1



Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 11 of 12

Excepted quantity:	E0	
IATA-packing instructions - Passenger:		203
IATA-max. quantity - Passenger:		75 kg
IATA-packing instructions - Cargo:		203
IATA-max. quantity - Cargo:		150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: Pentane

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

Other applicable information

Stowage Code:

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

Segregation Code:

SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

2004/42/EC (VOC): 64,2 % (437 g/l)

Additional information

Observe in addition any national regulations!

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 14.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 353 Multi 2020 Spray

Print date: 25.04.2016

Product code: 30587

Page 12 of 12

Abbreviations and acronyms

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 Harmonized 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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant R phrases (number and full text)

10	Flammable.
12	Extremely flammable.
36/38	Irritating to eyes and skin.
51	Toxic to aquatic organisms.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53	May cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)