

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL SIM Developer Spray

Print date: 17.03.2016

Product code: 21628

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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.
P280	This material and its container must be disposed of as hazardous waste.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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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		
200-661-7	propan-2-ol; isopropyl alcohol; isopropanol	25 - 50 %
67-63-0	F - Highly flammable, Xi - Irritant R11-36-67	
603-117-00-0	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
01-2119457558-25		
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	10 - 12,5 %
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	10 - 12,5 %
75-28-5	F+ - Extremely flammable R12	
601-004-00-0	Flam. Gas 1, Liquefied gas; H220 H280	
288-315-1	Fatty acids, tall-oil, compds. with oleylamine	0,1 - 1 %
85711-55-3	R43	
	Skin Sens. 1; H317	
604-612-4	Fatty acids, C18-unsatd. , trimers, compds. with oleylamine	0,1 - 1 %
147900-93-4	T - Toxic, N - Dangerous for the environment R43-48/25-51-53	
	Skin Sens. 1B, STOT RE 2, Aquatic Chronic 2; H317 H373 H411	
918-668-5	Hydrocarbons, C9, aromatics	0,1 - 1 %
64742-95-6	Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R10-37-51-53-65-66-67	
649-356-00-4	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066	
01-2119455851-35		

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. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off

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immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

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.

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

Carbon dioxide (CO₂), Foam, Extinguishing powder, Water fog.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. 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. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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

Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep away from sources of ignition. - No smoking. Take

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precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)

developer

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
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			
	Consumer DNEL, long-term	inhalation	systemic	89 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	319 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	26 mg/kg bw/day
64742-95-6	Hydrocarbons, C9, aromatics			
	Worker DNEL, long-term	inhalation	systemic	150 mg/m ³
	Worker DNEL, long-term	dermal	systemic	25 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	32 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	11 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	11 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	
Freshwater		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Micro-organisms in sewage treatment plants (STP)		2251 mg/l
Soil		28 mg/kg

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. Keep away from food, drink and animal feedingstuffs. When using do not eat or drink.

Eye/face protection

Eye glasses with side protection (DIN EN 166)

Hand protection

Tested protective gloves must be worn (DIN EN 374):
 Butyl caoutchouc (butyl rubber), Breakthrough time (maximum wearing time): 480 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

Not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Aerosol
 Colour: white
 Odour: like: Alcohol

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined

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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: 1,5 vol. %

Upper explosion limits: 12,0 vol. %

Ignition temperature: 365 °C

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

not determined

Vapour pressure:
(at 20 °C) 3500 hPaDensity (at 20 °C): 0,774 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: 79,4 %

9.2. Other information

Solid content: 20,4 %

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

Extremely flammable aerosol.

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 heat. Ignition hazard.

10.5. Incompatible materials

No information available.

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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 routes	Method	Dose	Species	Source
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol				
	oral	LD50	4570 mg/kg	Rat	
	dermal	LD50	13400 mg/kg	Rabbit	
106-97-8	butane				
	inhalative (4 h) gas	LC50	273000 ppm	Rat	GESTIS
64742-95-6	Hydrocarbons, C9, aromatics				
	oral	LD50	3592 mg/kg	Rat	
	dermal	LD50	>3160 mg/kg	Rabbit	
	inhalative (4 h) vapour	LC50	6193 mg/l	Rat	

Irritation and corrosivity

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (Fatty acids, tall-oil, compds. with oleylamine), (Fatty acids, C18-unsatd. , trimers, compds. with oleylamine)

STOT-single exposure

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol), (Hydrocarbons, C9, aromatics)

Severe effects after repeated or prolonged exposure

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

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.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol					
	Acute fish toxicity	LC50	>100 mg/l	96 h	fish	
	Acute algae toxicity	ErC50	>100 mg/l			
	Acute crustacea toxicity	EC50	>100 mg/l	48 h	Daphnia magna (Big water flea)	
64742-95-6	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50	9,2 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	2,9 mg/l	72 h	Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50	3,2 mg/l	48 h	Daphnia magna (Big water flea)	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	-0,16
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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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.

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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
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
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Marine pollutant: no
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, flammable
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
Excepted quantity: E0

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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: no

14.6. Special precautions for user

Warning: Gases under pressure

14.7. Transport in bulk according to Annex II of MARPOL73/78 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): 79,4 % (615 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): 1 - slightly water contaminating

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
Hydrocarbons, C9, aromatics

SECTION 16: Other information

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

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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. |
| 11 | Highly flammable. |
| 12 | Extremely flammable. |
| 36 | Irritating to eyes. |
| 37 | Irritating to respiratory system. |
| 43 | May cause sensitisation by skin contact. |
| 48/25 | Toxic: danger of serious damage to health by prolonged exposure if swallowed. |
| 51 | Toxic to aquatic organisms. |
| 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. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| 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.)