

# N-PENTANE

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Revision date: 12/21/2016 Supersedes: 8/11/2016 Version: 10.0

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

#### 1.1. Product identifier

Product form : Substance  
 Name : N-PENTANE  
 Product code : 050037900  
 Synonyms : NOVASPRAY n-pentane S / NOVEXPANS n-pentane S / NOVASPRAY n-pentane T / NOVEXPANS n-pentane T

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Blowing agent  
 Aerosol jet

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

INVENTEC PERFORMANCE CHEMICALS SA  
 20 rue de Bourgogne  
 69802 SAINT-PRIEST Cedex - France  
 T +33 (0) 4 72 28 13 00 - F +33 (0) 4 72 28 13 41  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

INVENTEC PERFORMANCE CHEMICALS ITALIA S.R.L.  
 Via Pusterla, 8  
 20013 Magenta - Milano - Italia  
 T (39) 02 48 40 12 06 - F (39) 02 48 46 13 41  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

DKF GERMANY / INVENTEC  
 Robert - Bosch - Strasse 14  
 40668 Meerbusch - Germany  
 T +49 (0)21 50 70 73 00 - F + 49 (0)21 50 70 73 17  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

INVENTEC Performance Chemicals Netherlands BV  
 Van Konijnenburgweg 84  
 4612 PL Bergen op zoom - Netherlands  
 T (31) 164 212 840 - F (31) 164 212 841  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

FRIGOGAZ Climalife kft Hungary  
 Villányi út 47  
 1118 Budaörs - Hungary  
 T (36) 23 431 660 - F (36) 23 431 661  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

INVENTEC PERFORMANCE CHEMICALS Switzerland  
 Z.I. Petits Champs 15 Yverdon Sud  
 CH-1400 Yverdon-les-Bains - Switzerland  
 T 41(0) 24 424 80 90 - F 41(0) 24 424 80 99  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Other

INVENTEC PERFORMANCE CHEMICALS ESPAÑA  
 Perez Pujol, 4 - 2º  
 46002 Valencia - Spain  
 T (34) 96 353 51 93 - F (34) 96 353 51 92  
[ContactFDS@inventec.dehon.com](mailto:ContactFDS@inventec.dehon.com)

##### Australia

AEROSOL SUPPLIES AUSTRALIA PTY LTD  
 Unit 6, 36 Curtis Road  
 Mulgrave, NSW 2756 Australia  
 T (61) 2 4577 8890 - F (61) 2 4587 8882  
[mail@aerosolsa.com.au](mailto:mail@aerosolsa.com.au)

#### 1.4. Emergency telephone number

Emergency number : AUSTRALIA: +61 412 024 612

Country	Organisation/Company	Address	Emergency number	Comment
Australia	Aerosol Supplies Aust P/L	U6, 36 Curtis Road Mulgrave, NSW 2756 Australia	+61 412 024 612 (24HR 365 days)	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flam. Liq. 1 H224  
 STOT SE 3 H336  
 Asp. Tox. 1 H304  
 Aquatic Chronic 2 H411

Full text of hazard classes and H-statements : see section 16

#### Adverse physicochemical, human health and environmental effects

Extremely flammable liquid and vapour. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



- Signal word (CLP) : Danger
- Hazard statements (CLP) : H224 - Extremely flammable liquid and vapour  
H304 - May be fatal if swallowed and enters airways  
H336 - May cause drowsiness or dizziness  
H411 - Toxic to aquatic life with long lasting effects
- Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P243 - Take precautionary measures against static discharge  
P273 - Avoid release to the environment  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P311 - Call a POISON CENTER, a doctor
- EUH-statements : EUH066 - Repeated exposure may cause skin dryness or cracking

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : N-PENTANE

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-pentane (Note C)	(CAS no) 109-66-0 (EC no) 203-692-4 (EC index no) 601-006-00-1 (REACH-no) 01-2119459286-30	>= 94	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Full text of H-statements: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. In the event of coughing and slight breathlessness: Call a doctor.
- First-aid measures after skin contact : Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Do not give the affected person anything to drink, even if he is fully conscious. Do not induce vomiting. Transfer to hospital rapidly.

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

- Symptoms/injuries : May cause drowsiness or dizziness.
- Symptoms/injuries after skin contact : Repeated exposure may cause skin dryness or cracking.
- Symptoms/injuries after ingestion : Dizziness, headaches, nausea. Risk of lung oedema. CNS depression. Suffocation.

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

Risk of aspiration pneumonia. Do not administer medicines from the adrenalin-ephedrine group.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Strong water jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapour. The vapours are denser than air and may travel along the ground. Distance ignition possible.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Precautionary measures fire : Cool down the containers exposed to heat with a water spray. Contain the extinguishing fluids by bunding.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate area.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Do not breathe vapours.  
Emergency procedures : Stop leak if safe to do so. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Remove all sources of ignition.

#### 6.2. Environmental precautions

Contain the spilled material by bunding (product is hazardous for the environment). Do not allow product to spread into the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Take up liquid spill into inert absorbent material.  
Methods for cleaning up : Wash with a solution of 60-70 % ethanol. Then wash with water and detergent.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Vapour extraction at source.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store : away from any source of ignition.  
Incompatible products : Oxidizing materials. Oxidizing materials.  
Heat and ignition sources : Keep away from heat and direct sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.  
Packaging materials : Recommended materials: Stainless steel, Polyethylene, Polypropylene, Polyester, Teflon.  
Unsuitable materials: Rubbers.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

n-pentane (109-66-0)		
Belgium	Local name	Pentane, tous isomères

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n-pentane (109-66-0)		
Belgium	Limit value (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	600 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	2250 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	750 ppm
Czech Republic	Local name	Pentan a isopentan
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	1020 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	4500 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	1526 ppm
Czech Republic	Remark (CZ)	*
Finland	Local name	n-Pentaani
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1500 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	500 ppm
Finland	HTP-arvo (15 min)	1900 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	630 ppm
France	Local name	n-Pentane
France	VME (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
France	VME (ppm)	1000 ppm
Germany	Local name	Pentan
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	1000 ppm
Germany	Remark (TRGS 900)	DFG,EU,Y
Hungary	Local name	n-PENTÁN
Hungary	AK-érték	2950 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	IV.
Italy	Local name	Pentano
Italy	OEL TWA (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	667 ppm
Netherlands	Local name	n-Pentaan
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Poland	Local name	Pentan
Poland	NDS (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Portugal	Local name	Pentano , todos os isómeros
Portugal	OEL TWA (ppm)	600 ppm
Slovenia	Local name	pentan
Slovenia	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Slovenia	OEL TWA (ppm)	1000 ppm
Spain	Local name	n-Pentano
Spain	VLA-ED (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	1000 ppm
Spain	Notes	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país.)
Sweden	Local name	Pentanes n-Pentane
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	600 ppm
United Kingdom	Local name	Pentane

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n-pentane (109-66-0)		
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	600 ppm
Norway	Local name	Pentan
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	750 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	250 ppm
Switzerland	Local name	n-Pentane
Switzerland	VME (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Switzerland	VME (ppm)	600 ppm
Switzerland	VLE (mg/m <sup>3</sup> )	3600 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	1200 ppm
Switzerland	Remark (CH)	4x15
USA - ACGIH	Local name	Pentane, all isomers (1989)
USA - ACGIH	ACGIH TWA (ppm)	1000 ppm
USA - OSHA	Local name	Pentane
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2950 mg/m <sup>3</sup>
USA - OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

### 8.2. Exposure controls

#### Appropriate engineering controls:

Local exhaust is needed at source of vapours. Ensure good ventilation of the work station.

#### Hand protection:

Nitrile-rubber protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR)	6 (> 480 minutes)	0.35		

#### Eye protection:

Safety glasses with side shields

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In the event of insufficient ventilation: Gas mask with filter type AX

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: weak. Hydrocarbon-like.
Odour threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -130 °C Not applicable
Freezing point	: No data available
Boiling point	: 35 - 42 °C
Flash point	: -40 °C
Critical temperature	: 196.5 °C
Auto-ignition temperature	: 260 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable liquid and vapour
Vapour pressure	: 56.5 kPa (20°C)
Critical pressure	: 3370 kPa

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Relative vapour density at 20 °C	: 2.48
Relative density	: No data available
Density	: 0.626 g/cm <sup>3</sup>
Solubility	: Water: < 1 g/l practically insoluble Organic solvent: Miscible
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive material according to EC criteria.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: 1.4 vol % 7.8 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents. oxidizing materials.

### 10.6. Hazardous decomposition products

On thermal decomposition (pyrolysis), releases : Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
 Waste disposal recommendations : Dispose of this material and its container at hazardous or special waste collection point.  
 Additional information : Flammable vapours may accumulate in the container.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
<b>14.1. UN number</b>		
1265	1265	1265
<b>14.2. UN proper shipping name</b>		
PENTANES	PENTANES	Pentanes
<b>Transport document description</b>		
UN 1265 PENTANES, 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1265 PENTANES, 3, I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1265 Pentanes, 3, I, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>		
3	3	3
<b>14.4. Packing group</b>		
I	I	I
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1  
 Limited quantities (ADR) : 0  
 Tank code (ADR) : L4BN  
 Transport category (ADR) : 1  
 Hazard identification number (Kemler No.) : 33  
 Orange plates :



Tunnel restriction code (ADR) : D/E  
 EAC code : 3YE

#### - Transport by sea

Limited quantities (IMDG) : 0  
 EmS-No. (Fire) : F-E  
 EmS-No. (Spillage) : S-D  
 Flash point (IMDG) : - 40°C

#### - Air transport

PCA Limited quantities (IATA) : Forbidden  
 PCA limited quantity max net quantity (IATA) : Forbidden  
 PCA packing instructions (IATA) : 351

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PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 361  
CAO max net quantity (IATA) : 30L

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions  
N-PENTANE is not on the REACH Candidate List  
N-PENTANE is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### France

Occupational diseases : RG 84 - Affections engendrées par les solvants organiques liquides à usage professionnel

##### Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters  
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

8.2	Protection of hands (gloves)	Added	
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Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 1	Flammable liquids, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H224	Extremely flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects
EUH066	Repeated exposure may cause skin dryness or cracking

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*