

Material Safety Data Sheet

Pentene-1

Version 1.00

Revision Date 21.06.2006



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

Trade name	Pentene-1
Synonyms	Pentene
Use	<i>industrial use, raw material for synthesis processes in the chemical industry</i>
Company	<i>Hitech Chemicals</i>

2. Composition/information on ingredients

Pentene-1

content: > 98.50 %W/W

CAS-No. 109-67-1

Symbol(s) F+

Index-No.

R-phrase(s) -R12 -R65

EG-Nr.: 203-694-5

For the full text of the R phrases mentioned in this Section, see Section 16.

3. Hazards identification

Identification of the risks

R12 *Extremely flammable.*

R65 *Harmful: may cause lung damage if swallowed.*

4. First aid measures

General advice *If you feel unwell, seek medical advice (show the label where possible).*

Inhalation *Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial*

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	<i>respiration. If symptoms persist, call a physician.</i>
Skin contact	<i>Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.</i>
Eye contact	<i>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.</i>
Ingestion	<i>If swallowed, seek medical advice immediately and show this container or label. Prevent vomiting if possible. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person.</i>

5. Fire-fighting measures

Suitable extinguishing media	<i>Water spray, Dry powder, Alcohol-resistant foam</i>
Specific hazards during fire fighting	<i>Flash back possible over considerable distance.</i>
Special protective equipment for fire-fighters	<i>Wear self-contained breathing apparatus and protective suit.</i>
Further information	<i>Cool containers / tanks with water spray.</i>

6. Accidental release measures

Personal precautions	<i>Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist.</i>
Environmental precautions	<i>Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.</i>
Methods for cleaning up	<i>Soak up with inert absorbent material and dispose of as hazardous waste.</i>
Additional advice	<i>Never return spills in original containers for re-use.</i>

7. Handling and storage

Handling

Safe handling advice	<i>Avoid inhalation of vapour or mist. Wear personal protective equipment.</i>
Advice on protection against fire and explosion	<i>Keep away from heat and sources of ignition. Use only explosion-proof equipment.</i>

Storage

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Requirements for storage areas and containers Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

no data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

no data available

Engineering measures

In use, may form flammable/explosive vapour-air mixture.

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection gloves suitable for permanent contact:
Material: nitrile rubber/nitrile latex
Break through time: > 8 h
Material thickness: 0.35 mm
unsuitable gloves
Material: natural rubber/natural latex, polychloroprene, butyl-rubber, Polyvinylchloride

Eye protection Safety glasses with side-shields

Skin and body protection protective suit, Safety shoes

Hygiene measures Wash hands before breaks and immediately after handling the product.

Protective measures Wear suitable protective equipment.

9. Physical and chemical properties

Form liquid
state of matter liquid; at 101.3 kPa
Colour colourless
Odour pungent
Melting point/range -165 °C; 101.3 kPa
Boiling point/range 29.9 °C

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Flash point	-51 °C; closed cup
Autoignition temperature	265 °C
Lower explosion limit	1.4 %(V)
Upper explosion limit	9 %(V)
Vapour pressure	708 hPa; 20 °C
Density	0.65 g/cm ³ ; 20 °C
Solubility/qualitative	miscible with most organic solvents
Water solubility	immiscible
Partition coefficient (n-octanol/water)	log Pow: 2.66; (literature value)
Viscosity, kinematic	0.325 mm ² /s; 20 °C
Relative vapour density	2.4

10. Stability and reactivity

Materials to avoid	Oxidizing agents, Reducing agents
Hazardous decomposition products	Carbon oxides

11. Toxicological information

Acute oral toxicity	Hexene-1: LD50 rat: > 5,600 mg/kg; (literature value)
Acute inhalation toxicity	Hexene-1: LC50 rat: 112.01 mg/l; ; 4 h(literature value)
Acute dermal toxicity	Hexene-1: LD50 rabbit: > 2,000 mg/kg; (literature value)
Skin irritation	Hexene-1: rabbit: slightly irritating; ; not irritating(literature value)
Eye irritation	Hexene-1: rabbit: slightly irritating; ; not irritating(literature value)
Sensitization	Hexene-1: Buehler Test guinea pig: not sensitizing; OECD Test Guideline 406; (literature value)
Further information	The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

12. Ecological information

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Biodegradability

Hexene-1:
Not readily biodegradable.; 22 %; OECD Guideline 301 D;
(literature value)

Ecotoxicity effects

Toxicity to fish

Hexene-1:
LC50 *Oncorhynchus mykiss*: 5.6 mg/l; 96 h; Directive
84/449/EEC, C.1; (literature value)

Toxicity to daphnia

Hexene-1:
EC50 *Daphnia magna*: 230 mg/l; 48 h; Directive 84/449/EEC,
C.2; (literature value)

Toxicity to algae

Hexene-1:
EC50 *Selenastrum capricornutum*: > 1,000 mg/l; 96 h; OECD
Test Guideline 201; (literature value)

General advice

The data are derived from the evaluations or test results
achieved with similar products (conclusion by analogy).

13. Disposal considerations

Product

Dispose of in accordance with local regulations.

Contaminated packaging

Store containers and offer for recycling of material when in
accordance with the local regulations.

14. Transport information

ADR

UN-No.: 1108; Class: 3; Packaging group: I; F1; Description of
the goods: 1-PENTENE

RID

UN-No.: 1108; Class: 3; Packaging group: I; F1; Description of
the goods: 1-PENTENE

ADNR

UN-No.: 1108; Class: 3; Packaging group: I; F1; Description of
the goods: 1-PENTENE

IMDG

UN-No.: 1108; Class: 3; EmS: F-E, S-D; Packaging group: I;
Description of the goods: 1-PENTENE

ICAO/IATA

UN-No. : 1108; Class: 3; Packaging group: I; Description of the
goods: 1-Pentene

15. Regulatory information

Labelling



Pr



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Regulatory base	67/548/EEC
Symbol(s)	F+: Extremely flammable
R-phrase(s)	R12: Extremely flammable. R65: Harmful: may cause lung damage if swallowed.
S-phrase(s)	S 3: Keep in a cool place. S 9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S33: Take precautionary measures against static discharges. S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Hazardous components which must be listed on the label	Pentene-1

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R12	Extremely flammable.
R65	Harmful: may cause lung damage if swallowed.

This MSDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product, and in particular how to safely handle, use, store and transport the product in the workplace. Since we cannot anticipate or control conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this MSDS in the context of how the user intends to handle, use, store or transport the product in the workplace and beyond, and communicate such information to all relevant parties. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. In such event our liability shall be limited only to direct damages suffered. Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request. All risk associated with the possession and application of the product passes on delivery.

The MSDS was created by:
The MSDS was approved by: