

## Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2016

Reviewed on 06/02/2016

### \* 1 Identification

**Product identifier**
**Trade name:** n-Pentane 95%

**Article number:** 210492

**CAS Number:** 109-66-0

**Index number:** 601-006-00-1

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:** Haltermann Carless Deutschland GmbH  
Schlengendeich 17  
D-21107 Hamburg, Germany  
Tel.: +49 40 333 18 0  
E-mail: Info-haltermann@h-c-s-group.com

**Information department:** Product Stewardship

**Emergency telephone number:** Infracore: +49 69 305 6418  
Chemtec: +1 800 424 9300

### \* 2 Hazard(s) identification

**Classification of the substance or mixture**

Flam. Liq. 2 H225 Highly flammable liquid and vapor.  
STOT SE 3 H336 May cause drowsiness or dizziness.  
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.  
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

**Label elements**

**GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**


**Signal word** Danger

**Hazard-determining components of labeling:**

**of labeling:** pentane

**Hazard statements** H225 Highly flammable liquid and vapor.  
H336 May cause drowsiness or dizziness.  
H304 May be fatal if swallowed and enters airways.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**
**NFPA ratings (scale 0 - 4)**


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HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = 1
FIRE	4	Fire = 4
REACTIVITY	0	Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

**3 Composition/information on ingredients**

Chemical characterization: Substances

CAS No. Description 109-66-0 pentane

Identification number(s)

Index number: 601-006-00-1

**\* 4 First-aid measures**

Description of first aid measures

General information:	Immediately remove any clothing soiled by the product.
After inhalation:	Supply fresh air; consult doctor in case of complaints.
After skin contact:	Immediately rinse with water.
After eye contact:	Rinse opened eye for several minutes under running water.
After swallowing:	Do not induce vomiting; immediately call for medical help.
Information for doctor:	
Most important symptoms and effects, both acute and delayed	No further relevant information available.
Danger	Aspiration hazard
Indication of any immediate medical attention and special treatment needed	No further relevant information available.

**5 Fire-fighting measures**

Extinguishing media

Suitable extinguishing agents: CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable

extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

**\* 6 Accidental release measures**

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

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**Methods and material for**

**containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### \* 7 Handling and storage

**Handling:**

**Precautions for safe handling** Keep receptacles tightly sealed.  
Store in cool, dry place in tightly closed receptacles.  
Keep away from heat and direct sunlight.  
Open and handle receptacle with care.

**Information about protection**

**against explosions and fires:** Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

**Conditions for safe storage, including any incompatibilities**
**Storage:**

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

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

**Further information about**

**storage conditions:** Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

**Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

**Additional information about**

**design of technical systems:** No further data; see item 7.

**Control parameters**
**Components with limit values that require monitoring at the workplace:**
**109-66-0 pentane**

PEL Long-term value: 2950 mg/m<sup>3</sup>, 1000 ppm

REL Long-term value: 350 mg/m<sup>3</sup>, 120 ppm

Ceiling limit value: 1800\* mg/m<sup>3</sup>, 610\* ppm  
\*15-min

TLV Long-term value: 2950 mg/m<sup>3</sup>, 1000 ppm

**Additional information:** The lists that were valid during the creation were used as basis.

**Exposure controls**
**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.

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	Wash hands before breaks and at the end of work. Do not ingest.
<b>Breathing equipment:</b>	Ensure good ventilation. This can be achieved by using a local exhaust or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device. Filter AX
<b>Protection of hands:</b>	Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
<b>Material of gloves</b>	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. Nitrile rubber, NBR > 0,38 mm
<b>Penetration time of glove material</b>	> 480 min (EN 374)
<b>Eye protection:</b>	Tightly sealed goggles

**\* 9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	36 °C (97 °F)

**Flash point:** -35 °C (-31 °F)**Flammability (solid, gaseous):** Not applicable.**Ignition temperature:** 285 °C (545 °F)**Decomposition temperature:** Not determined.**Auto igniting:** Not determined.**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.**Explosion limits:**

<b>Lower:</b>	1.4 Vol %
<b>Upper:</b>	7.8 Vol %

**Vapor pressure:** Not determined.**Density at 15 °C (59 °F):** 0.630 g/cm<sup>3</sup> (5.257 lbs/gal)**Relative density** Not determined.**Vapor density** Not determined.

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<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Other information</b>	No further relevant information available.

**\*10 Stability and reactivity**

<b>Reactivity</b>	No further relevant information available.
<b>Chemical stability</b>	
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Possibility of hazardous reactions</b>	No dangerous reactions known.
<b>Conditions to avoid</b>	No further relevant information available.
<b>Incompatible materials:</b>	No further relevant information available.
<b>Hazardous decomposition products:</b>	Carbon monoxide

**\*11 Toxicological information****Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:****109-66-0 pentane**

Oral LD50 &gt; 2000 mg/kg (rat) (OECD 401)

Inhalative LC50 /4 h &gt; 25.3 mg/L (rat) (OECD 403)

**Primary irritant effect:**

<b>on the skin:</b>	No irritant effect.
<b>on the eye:</b>	No irritating effect.
<b>Sensitization:</b>	No sensitizing effects known.

**Additional toxicological**

<b>information:</b>	Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
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**Carcinogenic categories****IARC (International Agency for Research on Cancer)**

Substance is not listed.

**NTP (National Toxicology Program)**

Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

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### \*12 Ecological information

**Toxicity**
**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**
**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**
**Remark:** Toxic for fish

**Additional ecological information:**
**General notes:** Water hazard class 2 (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

**Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

### 13 Disposal considerations

**Waste treatment methods**
**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**
**Recommendation:** Disposal must be made according to official regulations.

### \*14 Transport information

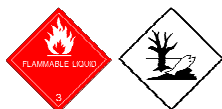
**UN-Number**
**DOT, ADR, IMDG, IATA** UN1265

**UN proper shipping name**
**DOT** Pentanes

**ADR** 1265 Pentanes, ENVIRONMENTALLY HAZARDOUS

**IMDG** PENTANES, MARINE POLLUTANT

**IATA** PENTANES

**Transport hazard class(es)**
**DOT**

**Class**

3 Flammable liquids

**Label**

3

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**ADR**

**Class**

3 (F1) Flammable liquids

**Label**

3

**IMDG**

**Class**

3 Flammable liquids

**Label**

3

**IATA**

**Class**

3 Flammable liquids

**Label**

3

**Packing group**
**DOT, ADR, IMDG, IATA**

II

**Environmental hazards:**
**Marine pollutant:**

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Warning: Flammable liquids

**Special marking (ADR):**
**Special precautions for user**
**Danger code (Kemler):**

33

**EMS Number:**

F-E,S-D

**Stowage Category**

E

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**
**DOT**
**Quantity limitations**

On passenger aircraft/rail: 1 L

On cargo aircraft only: 30 L

**Remarks:**

Special marking with the symbol (fish and tree).

**ADR**
**Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**IMDG**
**Limited quantities (LQ)**

0

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**Trade name: n-Pentane 95%****Excepted quantities (EQ)**

Code: E3

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 300 ml

**UN "Model Regulation":**

UN 1265 PENTANES, 3, II, ENVIRONMENTALLY HAZARDOUS

**\*15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Sara****Section 355 (extremely hazardous substances):**

Substance is not listed.

**Section 313 (Specific toxic chemical listings):**

Substance is not listed.

**TSCA (Toxic Substances Control Act):**

Substance is listed.

**Proposition 65****Chemicals known to cause cancer:**

Substance is not listed.

**Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

**Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

**Chemicals known to cause developmental toxicity:**

Substance is not listed.

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

Substance is not listed.

**TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has been carried out.**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.

**Date of preparation / last  
revision**

06/07/2016 / 27

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

DOT: US Department of Transportation

IATA: International Air Transport Association



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ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
BEL: Biological Exposure Limit  
Flam. Liq. 2: Flammable liquids – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Asp. Tox. 1: Aspiration hazard – Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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