

## SAFETY DATA SHEET

# UNIPAK Penetrant

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

#### 1.1. Product identifier

##### Trade name

UNIPAK Penetrant

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

##### Relevant identified uses of the substance or mixture

Rust-dissolver and corrosion protection

##### Uses advised against

None known.

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

##### Company and address

##### **Unipak A/S**

Marktoften 3C

8464 Galten

Denmark

+45 8626 1177

www.unipak.dk

##### E-mail

sales@unipak.dk

##### Revision

23/11/2022

##### SDS Version

1.1

##### Date of previous version

23/11/2022 (1.0)

#### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

### SECTION 2: Hazards identification

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

Aerosol 1; H222, H229, Extremely flammable aerosol. Pressurised container: May burst if heated.

#### 2.2. Label elements

##### Hazard pictogram(s)



##### Signal word

Danger

##### Hazard statement(s)

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

##### Safety statement(s)

##### General

-

##### Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Do not spray on an open flame or other ignition source. (P211)

Do not pierce or burn, even after use. (P251)

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#### Response

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#### Storage

Store in a well-ventilated place. (P403)

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412)

#### Disposal

-

#### Hazardous substances

None known.

#### Additional labelling

Not applicable.

### 2.3. Other hazards

#### Additional warnings

In the event of leaks, high concentrations of gases can quickly form. They can be toxic, asphyxiating, or explosive. This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
butane	CAS No.: 106-97-8 EC No.: 203-448-7 UK-REACH: Index No.: 601-004-01-8	10-40%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
isobutane	CAS No.: 75-28-5 EC No.: 200-857-2 UK-REACH: Index No.: 601-004-01-8	10-40%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
propane	CAS No.: 74-98-6 EC No.: 200-827-9 UK-REACH: Index No.: 601-003-00-5	10-40%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
Distillates (petroleum), hydrotreated middle Gasoil - unspecified [A complex combination of hydroc	CAS No.: 64742-46-7 EC No.: 265-148-2 UK-REACH: Index No.:	5-10%	Asp. Tox. 1, H304	[19]
benzaldehyde	CAS No.: 100-52-7 EC No.: 202-860-4 UK-REACH: Index No.: 605-012-00-5	<2%	Acute Tox. 4, H302	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

#### Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) and continue until irritation stops. Normally rinsing for less than 5 minutes is sufficient.

#### Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

#### Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

None known.

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

None known.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO<sub>2</sub>)

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: None

### SECTION 6: Accidental release measures

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

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

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

Minor spills are collected with a cloth. Shall be contained in suitable and tightly closed disposal containers.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Pressurized gas packs (spray cans, aerosol cans) must be stored behind a wire mesh, which allows gases to escape and holds back packs flying around.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage temperature

< 50°C

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

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

This product should only be used for applications quoted in section 1.2

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

butane

Long term exposure limit (8 hours) (ppm): 600

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 1450

Short term exposure limit (15 minutes) (ppm): 750

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 1810

Annotations:

Carc1 = Capable of causing cancer and/or heritable genetic damage if it contains more than 0.1% of buta-1,3-diene.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.  
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

#### DNEL

benzaldehyde

Duration	Route of exposure	DNEL
Long term – Local effects - Workers	Dermal	4,5 mg/cm <sup>2</sup>
Long term – Systemic effects - Workers	Dermal	34,7 mg/kg bw/d
Long term – Local effects - Workers	Inhalation	6,3 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	10,4 mg/m <sup>3</sup>

#### PNEC

benzaldehyde

Route of exposure	Duration of Exposure	PNEC
Water		10,7 µg/l

#### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

#### Measures to avoid environmental exposure

No specific requirements.

#### 8.3. Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

## Respiratory Equipment

Work situation	Type	Class	Colour	Standards
In case of inadequate ventilation	A	Class 2 (medium capacity)	Brown	EN14387



## Skin protection

No specific requirements.

## Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	0,3	120	EN374-2



## Eye protection

No specific requirements.

## SECTION 9: Physical and chemical properties

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

#### Physical state

Aerosol

#### Colour

Clear

#### Odour / Odour threshold

Solvent

#### pH

Testing not relevant or not possible due to the nature of the product.

#### Density (g/cm<sup>3</sup>)

Testing not relevant or not possible due to the nature of the product.

#### Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

#### Particle characteristics

Testing not relevant or not possible due to the nature of the product.

#### Phase changes

##### Melting point/Freezing point (°C)

Testing not relevant or not possible due to the nature of the product.

##### Softening point/range (waxes and pastes) (°C)

Does not apply to aerosols.

##### Boiling point (°C)

Testing not relevant or not possible due to the nature of the product.

##### Vapour pressure

Testing not relevant or not possible due to the nature of the product.

##### Relative vapour density

Testing not relevant or not possible due to the nature of the product.

##### Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

#### Data on fire and explosion hazards

##### Flash point (°C)

Does not apply to aerosols.

##### Ignition (°C)

Testing not relevant or not possible due to the nature of the product.

##### Auto flammability (°C)

Testing not relevant or not possible due to the nature of the product.

##### Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

## Solubility

### Solubility in water

Testing not relevant or not possible due to the nature of the product.

### n-octanol/water coefficient

Testing not relevant or not possible due to the nature of the product.

### Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

## 9.2. Other information

### Other physical and chemical parameters

No data available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

#### Acute toxicity

Product/substance	butane
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	1237 mg/l 2h. ·
Other information	

Product/substance	isobutane
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	1237 mg/l 2h. ·
Other information	

Product/substance	propane
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	1237 mg/l air 2h. ·
Other information	

Product/substance	Distillates (petroleum), hydrotreated middle Gasoil - unspecified [A complex combination of hydroc
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	> 5000 mg/kg ·

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Other information	
Product/substance	Distillates (petroleum), hydrotreated middle Gasoil - unspecified [A complex combination of hydroc
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	> 3160 mg/kg ·
Other information	
Product/substance	Distillates (petroleum), hydrotreated middle Gasoil - unspecified [A complex combination of hydroc
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	> 5266 mg/l ·
Other information	
Product/substance	benzaldehyde
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	1,43 ml/kg bw ·
Other information	
Product/substance	benzaldehyde
Test method	
Species	
Route of exposure	Dermal
Test	LD50
Result	>20000 ml/kg bw ·
Other information	
Product/substance	benzaldehyde
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	1 -< 5 mg/l air ·
Other information	

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

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

#### Respiratory sensitisation

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

#### Skin sensitisation

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

#### Germ cell mutagenicity

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

#### Carcinogenicity

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

#### Reproductive toxicity

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

#### STOT-single exposure

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

#### STOT-repeated exposure

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

#### Aspiration hazard

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

#### 11.2. Information on other hazards

#### Long term effects

None known.

#### Endocrine disrupting properties

None known.

#### Other information

None known.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Product/substance	butane
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	7,71 mg/L ·
Other information	

Product/substance	isobutane
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	49,9 mg/l ·
Other information	

Product/substance	isobutane
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	19,37 mg/l ·
Other information	

Product/substance	propane
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	27,98 mg/l ·
Other information	

Product/substance	propane
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	7,71 mg/l ·
Other information	

Product/substance	propane
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	LC50
Result	46,6 mg/l ·
Other information	



Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Product/substance	benzaldehyde
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	12,4 mg/l ·
Other information	

Product/substance	benzaldehyde
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	31,335 mg/l ·
Other information	

Product/substance	benzaldehyde
Test method	
Species	Daphnia
Compartment	
Duration	24 hours
Test	LC50
Result	50 mg/l ·
Other information	

#### 12.2. Persistence and degradability

Product/substance	benzaldehyde
Biodegradable	Yes
Test method	OECD 301 B
Result	> 95 %, 28d

#### 12.3. Bioaccumulative potential

Product/substance	butane
Test method	
Potential bioaccumulation	Yes
LogPow	1,0900
BCF	No data available.
Other information	

Product/substance	isobutane
Test method	
Potential bioaccumulation	Yes
LogPow	1,0900
BCF	No data available.
Other information	

Product/substance	propane
Test method	
Potential bioaccumulation	Yes
LogPow	1,0900
BCF	No data available.
Other information	

#### 12.4. Mobility in soil

butane  
LogKoc = 0.941571, High mobility potential.

#### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

#### 12.6. Endocrine disrupting properties

None known.

#### 12.7. Other adverse effects

None known.

## SECTION 13: Disposal considerations

### Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 3 - Flammable

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### EWC code

16 05 04\* Gases in pressure containers (including halons) containing dangerous substances




### Specific labelling

Not applicable.

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
ADR	UN1950	AEROSOLS	Class: 2 Labels: 2.1 Classification code: 5F 	-	No	Limited quantities: 1 L Tunnel restriction code: (D) See below for additional information.
IMDG	UN1950	AEROSOLS	Class: 2 Labels: 2.1 Classification code: 5F 	-	No	Limited quantities: 1 L EmS: F-D S-U See below for additional information.
IATA	UN1950	AEROSOLS	Class: 2 Labels: 2.1 Classification code: 5F 	-	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

### Additional information

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: None

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

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

#### Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

P3a - FLAMMABLE AEROSOLS, Qualifying quantity (lower-tier): 150 tonnes (net) / (upper-tier): 500 tonnes (net)

#### Additional information

Not applicable.

#### Sources

The Aerosol Dispensers Regulations 2009 No. 2824, amended in 2014 (No. 1130) and in 2018 (No. 29).

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No

## SECTION 16: Other information

### Full text of H-phrases as mentioned in section 3

H220, Extremely flammable gas.

H280, Contains gas under pressure; may explode if heated.

H302, Harmful if swallowed.

H304, May be fatal if swallowed and enters airways.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the mixture in regard to physical hazards has been based on experimental data.

#### ▼ The safety data sheet is validated by

tn

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en