

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** PATCHWOOD  
**Revision date :** 02.04.2015  
**Print date :** 02-04-2015

**Version (Revision) :** 3.0.0 (2.0.0)

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

**1.1 Product identifier**

PATCHWOOD (W00876)

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

Recovery of raw material or solvents. Reserved for industrial and professional use.

**Uses advised against**

Not suitable for oral, dermal and inhalation applications.

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

**Supplier (manufacturer/importer/only representative/downstream user/distributor)**

PFW Aroma Chemicals B.V.

**Street :** Veemweg 29-31

**Postal code/city :** NL - 3371 MT Barneveld

**Telephone :** +31 342 40 77 00

**Telefax :** +31 342 40 77 20

**Information contact :** pfw@pfw.nl

**1.4 Emergency telephone number**

+31 342 40 77 93

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or 1999/45/EC**

Harmful if swallowed.

Xn ; R 22

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

Acute Tox. 4 ; H302 - Acute toxicity (oral) : Category 4 ; Harmful if swallowed.

**Hazard classes and hazard categories**

Acute Tox. 4 (Oral)

**2.2 Label elements**

**Labelling (67/548/EEC or 1999/45/EC)**

**Hazard symbols and hazard statements of dangerous substances and preparations**



Xn ; Harmful

**Hazard components for labelling**

5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1

**R-phrases**

22 Harmful if swallowed.

**S-phrases**

35 This material and its container must be disposed of in a safe way.

51 Use only in well-ventilated areas.

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

### Hazard pictograms



Exclamation mark (GHS07)

### Signal word

Warning

### Hazard components for labelling

5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1

### Hazard statements

H302 Harmful if swallowed.

### Precautionary statements

P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.  
P330 Rinse mouth.  
P501 Dispose of contents/container to a chemical waste treatment facility or recycling plant.

## 2.3 Other hazards

None

## SECTION 3: Composition / information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1

Weight fraction : 50 - 100 %  
Classification 67/548/EEC : Xn ; R22  
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302

4-(4-Methyl-3-penten-1-yl)-3-cyclohexene-1-carboxaldehyde ; EC No. : 253-617-4; CAS No. : 37677-14-8

Weight fraction : < 2,5 %  
Classification 67/548/EEC : N ; R51/53  
Classification 1272/2008 [CLP] : Aquatic Chronic 2 ; H411

#### Additional information

Full text of R-, H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Medical treatment necessary. Remove victim out of the danger area. Put victim at rest, cover with a blanket and keep warm. Do not leave affected person unattended. If unconscious place in recovery position and seek medical advice.

#### In case of inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

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Wash immediately with: Water Do not wash with: Solvents/Thinner

### After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

### After ingestion

Rinse mouth thoroughly with water. Call a physician in any case! Do NOT induce vomiting.

### 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

None

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

alcohol resistant foam. Extinguishing powder.

#### Unsuitable extinguishing media

Strong water jet. Water mist.

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

#### Hazardous combustion products

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>) Carbon monoxide (CO).

### 5.3 Advice for firefighters

Do not inhale explosion and combustion gases. Use water spray jet to protect personnel and to cool endangered containers. Do not allow run-off from fire-fighting to enter drains or water courses.

#### Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

## SECTION 6: Accidental release measures

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

Special danger of slipping by leaking/spilling product. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation. Remove persons to safety. See protective measures under point 7 and 8.

### 6.2 Environmental precautions

Ensure all waste water is collected and treated via a waste water treatment plant. In case of entry into waterways, soil or drains, inform the responsible authorities.

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

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Sawdust. Collect in closed and suitable containers for disposal.

### 6.4 Reference to other sections

See protective measures under point 7 and 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. All work processes must always be designed so that the following is as low as possible: eye contact, skin contact. In case of entry into waterways, soil or drains, inform the responsible authorities.

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Wear personal protection equipment (see chapter 8).

## 7.2 Conditions for safe storage, including any incompatibilities

### Technical measures and storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Never use pressure to empty container.

### Hints on joint storage

Keep away from oxidising agent, acid and alkali.

**Storage class :** 10

**Storage class (TRGS 510) :** 10

## 7.3 Specific end use(s)

None

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

To date, no national critical limit values exist.

### 8.2 Exposure controls

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

#### Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

#### Personal protection equipment

##### Eye/face protection

Eye glasses with side protection

##### Skin protection

###### Hand protection

Gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Breakthrough times and swelling properties of the material must be taken into consideration.

**Suitable material :** Butyl caoutchouc (butyl rubber)

**Breakthrough time (maximum wearing time) :** >480 min.

**Thickness of the glove material :** 1.00 mm.

**Recommended glove articles :** Butyl Plus/R0,5

###### Body protection

Overall

##### Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values insufficient ventilation insufficient exhaust Handling larger quantities. Container device with compressed air (DIN EN 137) / Filtering device (full mask or mouthpiece) with filter: Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m<sup>3</sup> (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m<sup>3</sup> (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m<sup>3</sup> (1.0 % by vol.)

#### Environmental exposure controls

Send to a hazardous waste incinerator facility under observation of official regulations.

## SECTION 9: Physical and chemical properties

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## 9.1 Information on basic physical and chemical properties

**Odour threshold in air :** No data available

### Safety relevant basis data

<b>Approved packaging</b>		Glass/RDL/Aluminium
<b>Physical state :</b>		liquid
<b>Colour :</b>		colourless to pale yellow
<b>Odour :</b>		No data available
<b>Boiling temperature/boiling range :</b>	( 1013 hPa )	No data available
<b>Decomposition temperature :</b>		No data available
<b>Freezing point :</b>		No data available
<b>Flash point (Closed Cup) :</b>	>	100 °C
<b>Auto-ignition temperature :</b>		no data available
<b>Evaporation rate :</b>		slowly evaporating
<b>Lower explosion limit :</b>		No data available
<b>Upper explosion limit :</b>		No data available
<b>Explosive properties :</b>		none
<b>Vapour pressure :</b>	( 50 °C )	No data available
<b>Surface tension (20°C) :</b>	( 20 °C )	No data available
<b>Relative density (water = 1) :</b>	( 20 °C )	no data available
<b>Water solubility :</b>		no data available
<b>pH value :</b>		No data available
<b>Log Pow :</b>		No data available
<b>Viscosity :</b>	( 20 °C )	No data available
<b>Vapour density (air = 1) :</b>	( 1013 hPa / 20 °C ) ca.	1
<b>Oxidising properties :</b>		No data available
<b>Refractive Index</b>	no data available	

## 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

No information available.

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

Exothermic reaction with: oxidising agent strong acid strong alkali

### 10.6 Hazardous decomposition products

Decomposition with: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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## Acute effects

### Acute oral toxicity

Parameter : LD50 ( 5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 546 mg/kg  
Source : PFW Aroma Chemicals BV

### Acute dermal toxicity

Parameter : LD50 ( 5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : > 2000 mg/kg  
Source : PFW Aroma Chemicals BV

## Irritant and corrosive effects

### Primary irritation to the skin

Parameter : Irritation of the skin ( 5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1 )  
Parameter : Rabbit  
Result : No Irritation  
Methode : 100%  
Source : PFW Aroma Chemicals BV

### Irritation to eyes

Parameter : Irritation of the eyes ( 5,5-dimethyl-hexahydro-2H-2,4a-Methanonaphthalen-1(5H)-one ; CAS No. : 77923-74-1 )  
Parameter : Rabbit  
Result : No Irritation  
Methode : 100%  
Source : PFW Aroma Chemicals BV

## SECTION 12: Ecological information

### 12.1 Toxicity

No information available.

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 Other adverse effects

No information available.

### 12.7 Further ecological information

None

## SECTION 13: Disposal considerations

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### 13.1 Waste treatment methods

Send to a hazardous waste incinerator facility under observation of official regulations. Clean IBCs or drums at approved facility only. Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### 14.1 UN number

No dangerous goods in sense of this transport regulation.

### 14.2 UN proper shipping name

No dangerous goods in sense of this transport regulation.

### 14.3 Transport hazard class(es)

No dangerous goods in sense of this transport regulation.

### 14.4 Packing group

No dangerous goods in sense of this transport regulation.

### 14.5 Environmental hazards

No dangerous goods in sense of this transport regulation.

### 14.6 Special precautions for user

None

## SECTION 15: Regulatory information

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

#### National regulations

#### Water hazard class (WGK)

Class : water pollutant according VwVwS

#### Other regulations, restrictions and prohibition regulations

### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

15. Water hazard class (WGK)

### 16.2 Abbreviations and acronyms

a.i. = Active ingredient; ACGIH = American Conference of Governmental Industrial Hygienists (US); ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road; AFFF = Aqueous Film Forming Foam; AICS = Australian Inventory of Chemical Substances; AISE = International Association for Soaps, Detergents and Maintenance Products (joint project of AISE and CEFIC); AOAC = AOAC International (formerly Association of Official Analytical Chemists); aq. = Aqueous; Asia-PAC = Asia Pacific; ASTM = American Society of Testing and Materials (US); atm = Atmosphere(s); B.V. = Beperkt Vennootschap (LTD = Limited); BCF = Bioconcentration Factor; bp = Boiling point at stated pressure; bw = Body weight; ca = (Circa) about; CAS No = Chemical Abstracts Service Number (see ACS - American Chemical Society); CEFIC = European Chemical Industry Council (established 1972); CEPA = Canadian Environmental Protection Act (CAN); CEPA = Canadian Environmental Protection Act (Canada); CIPAC = Collaborative

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International Pesticides Analytical Council; CLP = REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.; CoE = Council of Europe (EU); Conc = Concentration; cP = CentiPoise; CSNN = Chemical Substance Nomination & Notification (Taiwan); cSt = Centistokes; d = Day(s); DIN = Deutsches Institut für Normung e.V.; DNEL = Derived No-Effect Level; DSL = Domestic Substances List; DT50 = Time for 50% loss; half-life; EbC50 = Median effective concentration (biomass, e.g. of algae); EC = European Community; European Commission; EC50 = Median effective concentration; ECL = Existing Chemicals List (Korea); EINECS = European Inventory of Existing Commercial Chemical Substances (EU, outdated, now replaced by EC Number); ELINCS = European List of Notified (New) Chemicals; ENCS = Existing and New Chemical Substances Inventory (Japan); ErC50 = Median effective concentration (growth rate, e.g. of algae); EU = European Union; EWC = European Waste Catalogue; FAO = Food and Agriculture Organization (United Nations); FEMA = Flavor & Extract Manufacturers Association (USA); FLAVIS = Flavour Information System (EU); GIFAP = Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques (now CroLife International); GRAS = Generally Recognized As Safe (USA); h = Hour(s); hPa = HectoPascal (unit of pressure); IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IC50 = Concentration that produces 50% inhibition; IECS = Inventory of Existing Chemical Substances (China); IMDG Code = International Maritime Dangerous Goods Code; IMO = International Maritime Organization; ISO = International Organization for Standardization; IUCLID = International Uniform Chemical Information Database; IUPAC = International Union of Pure and Applied Chemistry; IVIS = In-Vitro Irritancy Score; JECFA = Joint Expert Committee on Food Additives (United Nations); kg = Kilogram; Kow = Distribution coefficient between n-octanol and water; kPa = KiloPascal (unit of pressure); LC50 = Concentration required to kill 50% of test organisms; LD50 = Dose required to kill 50% of test organisms; LEL = Lower Explosive Limit/Lower Explosion Limit; LOAEL = Lowest observed adverse effect level; LVE = Low Volume Exemption; mg = Milligram; min = Minute(s); ml = Milliliter; mmHg = Pressure equivalent to 1 mm of mercury (133.3 Pa); mp = Melting point; MRL = Maximum Residue Limit; MSDS = Material Safety Data Sheet; n.o.s. = Not Otherwise Specified; NDSL = Non-Domestic Substances List; NIOSH = National Institute for Occupational Safety and Health (US); NOAEL = No Observed Adverse Effect Level; NOEC = No observed effect concentration; NOEL = No Observable Effect Level; NOx = Oxides of Nitrogen; NZIoC = New Zealand Inventory of Chemicals; OECD = Organization for Economic Cooperation and Development; OEL = Occupational Exposure Limits; Pa = Pascal (unit of pressure); PBT = Persistent, Bioaccumulative or Toxic; pH = -log<sub>10</sub> hydrogen ion concentration; PICCS = Philippine Inventory of Chemicals and Chemical Substances; pKa = -log<sub>10</sub> acid dissociation constant; PNEC = Predicted No Effect Concentration; POPs = Persistent Organic Pollutants; ppb = Parts per billion; PPE = Personal Protection Equipment; ppm = Parts per million; ppt = Parts per trillion; PVC = Polyvinyl Chloride; QSAR = Quantitative Structure-Activity Relationship; REACH = Registration, Evaluation and Authorization of Chemicals (EU, see NCP); SI = International System of Units; STEL = Short-Term Exposure Limit; tech. = Technical grade; TSCA = Toxic Substances Control Act (US); TSCA = Toxic Substances Control Act (USA); TWA = Time-Weighted Average; UN = United Nations; vPvB = Very Persistent and Very Bioaccumulative; VwVwS = Verwaltungsvorschrift wassergefährdender Stoffe; WHO = World Health Organization = OMS; y = Year(s);

### 16.3 Key literature references and sources for data

None

### 16.5 Relevant R-, H- and EUH-phrases (Number and full text)

H302	Harmful if swallowed.
H411	Toxic to aquatic life with long lasting effects.
22	Harmful if swallowed.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 16.6 Training advice

None

### 16.7 Additional information

None

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.



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