

| Trade name : | PATCHWOOD | | |
|-----------------|------------|----------------------|---------------|
| Revision date : | 11.04.2017 | Version (Revision) : | 5.0.0 (4.0.0) |
| Print date : | 12-4-2017 | | |
| | | | |

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

Perfumes, fragrances, Non alcoholic perfumes, Attars for Personal and / or industrial application.

Uses advised against

Not intended for oral consumption.

1.3 Details of the supplier of the safety data sheet Supplier (manufacturer/importer/only representative/downstream user/distributor)

PFW Aroma Ingredients B.V.

Street : Veemweg 29-31

Postal code/city: NL - 3771 MT Barneveld

Telephone : +31 342 407 700 **Telefax :** +31 342 407 720

Information contact : regulatory.affairs@keva.co.in

1.4 Emergency telephone number

+31 342 407 793 USA: +1 800 222 1222

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Acute Tox. 4 ; H302 - Acute toxicity (oral) : Category 4 ; Harmful if swallowed. Skin Irrit. 3 ; H316 - Skin corrosion/irritation : Category 3 ; Causes mild skin irritation. Skin Sens. 1B ; H317 - Skin sensitisation : Category 1B ; May cause an allergic skin reaction.

2.2 Label elements

Labelling according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard pictograms





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| P270 | Do no eat, drink or smoke wh | en using this product. | |
| P301+P310 | IF SWALLOWED: Immediately | call a POISON CENTER/doctor/ | |

Dispose of contents/container to a chemical waste treatment facility or recycling plant.

P501 2.3 Other hazards

P330

None

SECTION 3: Composition/information on ingredients

Rinse mouth.

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 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 :

1 - 2,5 %

Classification 1272/2008 [CLP] : Skin Sens. 1B ; H317 Aquatic Chronic 2 ; H411 Aquatic Acute 2 ; H401

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.

Following 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

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



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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 (CO2) 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. Wear personal protection equipment (refer to section 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 absorbtion of humidity. Never use pressure to empty container.

Hints on joint storage

Keep away from oxidising agent, acid and alkali.

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**



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Provide adequate ventilation as well as local exhaustion 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/m3 (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m3 (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m3 (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

9.1 Information on basic physical and chemical properties

Odour threshold in air : No data available

Safety relevant basis data

| Approved packaging Physical state : | | (| Glass/RDL/Aluminium liquid | | |
|--|--------------|---------|-------------------------------|----|--------------|
| Colour : | | | colourless to pale yellow | | |
| Odour : | | | No data available | | |
| Initial boiling point and boiling range : | (1013 hPa) | approx. | 265 | °C | |
| Decomposition temperature : | | | No data available | | |
| Freezing point : | | | No data available | | |
| Flash point (Closed Cup) : | | > | 93 | °C | DIN EN 51578 |
| Auto-ignition temperature : | | | no data available | | |
| Evaporation rate : | | | slowly evaporating | | |
| Lower explosion limit : | | | No data available | | |
| Upper explosion limit : | | | No data available | | |
| Explosive properties : | | | none | | |
| Vapour pressure : | (50 °C) | | No data available | | |
| Surface tension (20°C) | (20 °C) | | No data available | | |
| Relative density (water = 1) : | (20 °C) | | no data available | | |
| Water solubility : | | | no data available | | |
| pH value : | | | No data available | | |
| Log Pow : | | | | | |



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| | Viscosity : | | (20 °C) | | No data available | |
| | Vapour density (| air = 1) : | (1013 hPa / 20 °C) | approx. | 1 | |
| | Oxidising proper Refractive Index | ties : | no data available | | No data available | |
| 9.2 | Other informa | ition | | | | |
| SEC | TION 10: Stab | ility and rea | ctivity | | | |
| 10.1 | Reactivity | | | | | |
| 10.2 | No information ava | | | | | |
| 10.3 | No information ava Possibility of | | eactions | | | |
| _0.0 | No information ava | | | | | |
| 10.4 | Conditions to | avoid | | | | |
| | No information ava | | | | | |
| 10.5 | Incompatible | | | | | |
| 10.6 | | | agent strong acid str | ong alkalı | | |
| 10.0 | Hazardous de | - | le. Carbon monoxide (| (CO) | | |
| | Decomposition wit | | | | | |
| SEC | TION 11: Toxic | cological inf | ormation | | | |
| 11.1 | Information of No information available | - | ical effects | | | |
| SEC | TION 12: Ecolo | ogical inform | nation | | | |
| 12.1 | Toxicity | | | | | |
| | No information ava | | | | | |
| 12.2 | Persistence a | - | bility | | | |
| 173 | No information ava Bioaccumulat | | | | | |
| 12.5 | No information ava | - | | | | |
| 12.4 | Mobility in soi | | | | | |
| | No information ava | | | | | |
| 12.5 | Results of PB | Γ and vPvB | assessment | | | |
| | | | PBT/vPvB criteria of R | EACH, Ann | ex XIII. | |
| 12.6 | Other adverse | | | | | |
| | No information ava | | | | | |
| 12.7 | Additional eco | otoxicologic | al information | | | |
| | None | | | | | |
| SEC | TION 13: Disp | osal conside | erations | | | |



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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 good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es) No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

- 14.5 Environmental hazards No dangerous good in sense of these transport regulations.
- 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 which apply

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

02. Classification of the substance or mixture ' 03. Hazardous ingredients

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 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 =



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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 CropLife 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; IECSC = 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 = -log10 hydrogen ion concentration; PICCS = Philippine Inventory of Chemicals and Chemical Substances; pKa = -log10 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 Bioacccumulative; 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 of all the individual ingredients

| H302 | Harmful if swallowed. |
|-------|---|
| H317 | May cause an allergic skin reaction. |
| H401 | Toxic to aquatic life. |
| 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.