





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

- **1.1 Product identifier**
- **Trade name:** ZWALUW COCKPIT SPRAY 400ML
- **Article number:** 12009745
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Cleaning material/ Detergent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DEN BRAVEN
Denariusstraat 11
4903 RC Oosterhout
The Netherlands
Tel: + 31 (0)162-491000
Fax: +31 (0)162-421217
E-mail: info@denbraven.com
Internet: www.denbraven.com
- **Further information obtainable from:**
Product safety department.
info@denbraven.com
- **1.4 Emergency telephone number:**
info@denbraven.com
Tel: +31 (0)162-491000

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 -  GHS02 flame
 - Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
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 -  GHS07
 - Skin Irrit. 2 H315 Causes skin irritation.
 - STOT SE 3 H336 May cause drowsiness or dizziness.
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 - Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
 - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
 -  
 - GHS02 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cycloalkanes, < 5 % n-hexane

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· Hazard statements

- H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
 H315 Causes skin irritation.
 H336 May cause drowsiness or dizziness.
 H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P261 Avoid breathing vapours or spray.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
 P501 Dispose of contents/container to hazardous or special waste collection point.

· Additional information:

Buildup of explosive mixtures possible without sufficient ventilation.

· 2.3 Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-xxxx	isobutane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	25-<50%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-xxxx	propane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	10-<20%
EC number: 927-510-4 Reg.nr.: 01-2119475515-33-xxxx	Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	5-<10%
EC number: 921-024-6 Reg.nr.: 01-2119475514-35-xxxx	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cycloalkanes, < 5 % n-hexane ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	5-<10%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32-xxxx	butane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	5-<10%

· Regulation (EC) No 648/2004 on detergents / Labelling for contents

aliphatic hydrocarbons	≥ 30%
perfumes (CITRAL, D-LIMONENE)	< 5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Take affected persons into fresh air and keep quiet.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Immediately remove any clothing soiled by the product.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Headache
Dizziness
Dizziness
Coughing
Nausea
- **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed or in case of vomiting, danger of entering the lungs.
Later observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Foam
Fire-extinguishing powder
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **6.4 Reference to other sections** See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Avoid contact with skin and eyes.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Observe official regulations on storing packagings with pressurised containers.

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

- **Further information about storage conditions:** Protect from heat and direct sunlight.

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

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

CAS: 106-97-8 butane

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

- **Recommended filter device for short term use:** Filter AX

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**

Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.45 mm

- **Penetration time of glove material**

≥ 240 min

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Aerosol
Colour:	Clear
Odour:	Petrol-like

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: < 0 °C

· Flash point: Not applicable, as aerosol.

· Ignition temperature: >200 °C

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Density at 20 °C: 0.64687 g/cm³

· Solubility in / Miscibility with water: Not miscible or difficult to mix.

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Organic solvents: 69.8 %

VOC (EC) 451.6 g/l

· 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions No dangerous reactions known.

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products:

Aldehyde

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

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

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	116 mg/l (rat)
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CAS: 75-28-5 isobutane

Inhalative	LC50/4 h	>50 mg/l (rat)
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CAS: 74-98-6 propane

Inhalative	LC50/4 h	20 mg/l (rat)
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Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes

Oral	LD50	>5840 mg/kg (rat)
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Dermal	LD50	>2920 mg/kg (rat)
Inhalative	LC50/4 h	>23.3 mg/l (rat)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cycloalkanes, < 5 % n-hexane		
Oral	LD50	>5840 mg/kg (rat)
Dermal	LD50	>2920 mg/kg (rat)
Inhalative	LC50/4 h	<25.2 mg/l (rat)
CAS: 106-97-8 butane		
Inhalative	LC50/4 h	658 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

· 12.1 Toxicity

· **Aquatic toxicity:**

Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes

EC50/48 h	3 mg/l (daphnia)
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Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cycloalkanes, < 5 % n-hexane

EC50/48 h	3 mg/l (daphnia)
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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

- **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Harmful to aquatic organisms

Water hazard class 2 (German Regulation) (Self-assessment): 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.

· **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· European waste catalogue

16 05 04*	gases in pressure containers (including halons) containing hazardous substances
15 01 04	metallic packaging

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number
· ADR,RID,ADN, IMDG, IATA UN1950

· 14.2 UN proper shipping name

· ADR/RID/ADN	UN1950 AEROSOLS
· IMDG	AEROSOLS
· IATA	AEROSOLS, flammable

· 14.3 Transport hazard class(es)
· ADR/RID/ADN


· Class	2 5F Gases.
· Label	2.1

· IMDG, IATA


· Class	2.1
· Label	2.1

· 14.4 Packing group
· ADR,RID,ADN, IMDG, IATA Void

· 14.5 Environmental hazards:
· Marine pollutant: No

· 14.6 Special precautions for user

· Danger code (Kemler):	Warning: Gases.
· EMS Number:	-
· Stowage Code	F-D,S-U
· Segregation Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

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· Transport/Additional information:
· ADR/RID/ADN
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

· Transport category

2

· Tunnel restriction code

D

· IMDG
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

· UN "Model Regulation":

UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P3a FLAMMABLE AEROSOLS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 28, 29

· National regulations:
· Information about limitation of use: Employment restrictions concerning juveniles must be observed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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.

· Relevant phrases

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· Department issuing SDS: Product safety department.

· Contact: Kees van Bommel / Pascal Timmermans

· 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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – 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
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· *** Data compared to the previous version altered.**

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