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

1.1. Product identifier

Product form : Mixtures

Product name : Quantum Cabin Refresher

Product code : ZGB410014

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Automotive Care Products

Function or use category : Aerosol propellants

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Volkswagen Group UK Limited
Yeomans Drive
MK14 5AN - UK
T +44 (0) 800 333666

1.4. Emergency telephone number

Emergency number : Hazchem line: 0044 (0) 7970 779978

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aerosol 1	H222;H229
Eye Irrit. 2	H319

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H222 - Extremely flammable aerosol
H229 - Pressurised container: May burst if heated
H319 - Causes serious eye irritation

EUH-statements : EUH208 - Contains Carvone. May produce an allergic reaction

Precautionary statements (CLP) : P102 - Keep out of reach of children
P280 - Wear eye protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
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
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% w	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5 (REACH-no) 01-2119457610-43	50 - 75	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Butane n-	(CAS-No.) 106-97-8 (EC-No.) 203-448-7 (EC Index-No.) 601-004-00-0 (REACH-no) 01-2119474691-32	25 - 50	Flam. Gas 1, H220
Propan-2-ol	(CAS-No.) 67-63-0 (EC-No.) 200-661-7 (EC Index-No.) 603-117-00-0 (REACH-no) 01-2119457558-25	1 - 2.5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Carvone	(CAS-No.) 99-49-0 (EC-No.) 202-759-5 (EC Index-No.) 606-148-00-8 (REACH-no) 01-2119962458-25	0.1 - 1	Skin Sens. 1, H317

Name	Product identifier	Specific concentration limits
Ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5 (REACH-no) 01-2119457610-43	(C >= 50) Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Keep victim at rest in half upright position. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Keep watching the victim. Give psychological aid. Prevent cooling by covering the victim (no warming up). Keep the victim calm, avoid physical strain. If necessary seek medical advice.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. As it is a spray can packaging it is most unlikely that large quantities will be swallowed.

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

Symptoms/effects after eye contact : Causes serious eye irritation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol. Heating will cause a rise in pressure with a risk of bursting. Gas/vapour flammable with air within explosion limits. Gas/vapour spreads at floor level: ignition hazard.

Explosion hazard : Pressurised container: May burst if heated. Product is not explosive.

5.3. Advice for firefighters

Firefighting instructions : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use special care to avoid static electric charges. Ensure adequate ventilation, especially in confined areas.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable gloves and eye/face protection. protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency procedures : Mark the danger area. No naked flames, sparks, and do not smoke. Keep upwind. Close doors and windows of adjacent premises. Large spills/in confined spaces: consider evacuation. Prevent flow to low areas. In confined space use self-contained breathing apparatus. Take off contaminated clothing and wash before reuse.

6.1.2. For emergency responders

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Meet the legal requirements. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Presents no particular risk when handled in accordance with good occupational hygiene practice.

Hygiene measures : Use good personal hygiene practices. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store seperately.

Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Storage temperature : ≤ 45 °C

Heat and ignition sources : Keep away from sources of ignition - No smoking.

Information on mixed storage : Keep away from strong acids and strong oxidizers.

Storage area : Meet the legal requirements. Protect from heat and direct sunlight. Store in a well-ventilated place. Store in a dry place. Fireproof storeroom. Ventilation along the floor.

Special rules on packaging : correctly labelled. Meet the legal requirements.

Packaging materials : Pressurised small gas containers (aerosol cans).

7.3. Specific end use(s)

See product bulletin for detailed information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethanol (64-17-5)

Belgium	Limit value (mg/m³)	1907 mg/m³

Ethanol (64-17-5)

Belgium	Limit value (ppm)	1000 ppm

Butane n- (106-97-8)

Belgium	Limit value (ppm)	1000 ppm

Propan-2-ol (67-63-0)

Belgium	Limit value (mg/m³)	500 mg/m³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m³)	1000 mg/m³
Belgium	Short time value (ppm)	400 ppm
France	VLE (mg/m³)	980 mg/m³
France	VLE (ppm)	400 ppm

Ethanol (64-17-5)

DNEL/DMEL (Workers)	
Acute - local effects, inhalation	1900 mg/m³
Long-term - systemic effects, dermal	343 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	950 mg/m³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	950 mg/m³
Long-term - systemic effects,oral	87 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	114 mg/m³
Long-term - systemic effects, dermal	206 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.96 mg/l
PNEC aqua (marine water)	0.79 mg/l
PNEC aqua (intermittent, freshwater)	2.75 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.6 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.63 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	580 mg/l

Propan-2-ol (67-63-0)

DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	888 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	500 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	26 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	89 mg/m³
Long-term - systemic effects, dermal	319 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	140.9 mg/l
PNEC aqua (marine water)	140.9 mg/l
PNEC aqua (intermittent, freshwater)	140.9 mg/l
PNEC aqua (intermittent, marine water)	140.9 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	552 mg/kg dwt
PNEC sediment (marine water)	552 mg/kg dwt
PNEC (Soil)	
PNEC soil	28 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	160 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	2251 mg/l

Carvone (99-49-0)

DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.333 mg/kg bodyweight/day

Carvone (99-49-0)

Long-term - systemic effects, inhalation	1.175 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.166 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.289 mg/m³
Long-term - systemic effects, dermal	0.166 mg/kg bodyweight/day
PNEC (Sediment)	
PNEC sediment (freshwater)	0.192 mg/kg dwt
PNEC sediment (marine water)	0.019 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.035 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

L-menthol; 2-isopropyl-5-methylcyclohexanol (2216-51-5)

DNEL/DMEL (Workers)	
Acute - local effects, inhalation	10 mg/m³
Long-term - systemic effects, dermal	19 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	132 mg/m³
Long-term - local effects, inhalation	10 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	9.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	33 mg/m³
Long-term - systemic effects, dermal	9.4 mg/kg bodyweight/day
PNEC (Oral)	
PNEC oral (secondary poisoning)	83.3 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	2.37 mg/l

trans-menthone (89-80-5)

DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	7.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	26.1 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	3.7 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6.4 mg/m³
Long-term - systemic effects, dermal	3.7 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.025 mg/l
PNEC aqua (marine water)	0.003 mg/l
PNEC aqua (intermittent, freshwater)	0.25 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.456 mg/kg dwt
PNEC sediment (marine water)	0.046 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.076 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	246.67 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	0.24 mg/l

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Does not require any specific or particular technical measures.

Personal protective equipment : Gloves. Safety glasses.

Hand protection	: Polyvinylchloride (PVC) . Neoprene. Nitrile rubber. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Time of penetration is to be checked with the glove producer.
Other information	: Breakthrough time : >30'. Thickness of the glove material >0.1 mm.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Colour	: Colourless.
Odour	: peppermint odour.
Odour threshold	: No data available
pH	:
Relative evaporation rate (butylacetate=1)	: 2
refraction index	:
Melting point	: No data available
Freezing point	: No data available
Boiling point	: < 0 °C
Flash point	: < 0 °C
Auto-ignition temperature	: 365 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 3547 hPa
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density @20°C	: 790 kg/m³
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic @40°C	: < 1 mm²/s
Viscosity, dynamic @40°C	: 1 mPa.s
Viscosity	:
Viscosity Index	:
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1.8 - 19 vol %

9.2. Other information

VOC content	: 96.1 %
Additional information	: The physical and chemical data in this section are typical values for this product and are not intended as product specifications.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Extremely flammable aerosol. Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On burning: release of harmful/irritant gases/vapours. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Ethanol (64-17-5)

LD50 oral rat	10470 mg/kg @95%
LC50 inhalation rat (mg/l)	117 - 125 mg/l/4h Sprague-Dawley
ATE CLP (oral)	10470.000 mg/kg bodyweight
ATE CLP (vapours)	117.000 mg/l/4h
ATE CLP (dust,mist)	117.000 mg/l/4h

Propan-2-ol (67-63-0)

LD50 oral rat	5840 mg/kg bodyweight Sherman
LD50 dermal rabbit	13900 mg/kg bodyweight
LC50 inhalation rat (mg/l)	> 25 mg/l
ATE CLP (oral)	5840.000 mg/kg bodyweight
ATE CLP (dermal)	13900.000 mg/kg bodyweight

Carvone (99-49-0)

LD50 oral rat	5400 mg/kg bodyweight Sprague Dawley
LD50 dermal rat	> 2000 mg/kg bodyweight Sprague Dawley
ATE CLP (oral)	5400.000 mg/kg bodyweight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : May have a narcotic effect at high concentrations.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Ethanol (64-17-5)

LC50 fish 1	96h 14200 mg/l Pimephales promelas
LC50 other aquatic organisms 1	48h 5012 mg/l Ceriodaphnia dubia

Propan-2-ol (67-63-0)

LC50 fish 1	96h 9640 mg/l pimephales promelas
EC50 Daphnia 1	24h 9714 mg/l daphnia magna
LOEC (chronic)	1000 mg/l @8d algae

Carvone (99-49-0)

LC50 fish 1	96h 6.1 mg/l Oncorhynchus mykiss
EC50 Daphnia 1	48h 38 mg/l Daphnia magna
EC50 other aquatic organisms 1	72h 19 mg/l Pseudokirchneriella subcapitata
LOEC (acute)	72h 14 mg/l Pseudokirchneriella subcapitata
NOEC (acute)	72h 4.3 mg/l Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Ethanol (64-17-5)

Persistence and degradability	biodegradable. Readily biodegradable in water.

Propan-2-ol (67-63-0)

Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Quantum Cabin Refresher

Bioaccumulative potential	Not established.

Ethanol (64-17-5)

Log Kow	-0.35
Bioaccumulative potential	Slightly bioaccumulative.

Propan-2-ol (67-63-0)

Log Pow	0.05
Log Kow	< 4
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Propan-2-ol (67-63-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations. Pressurized container: Do not pierce or burn, even after use. Remove to an authorized waste treatment plant.
European List of Waste (LoW) code	:	18 01 06* - chemicals consisting of or containing dangerous substances 15 01 11* - metallic packaging containing a dangerous solid porous matrix (e.g. asbestos), including empty pressure containers

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	:	1950

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	AEROSOLS
Transport document description (ADR)	:	UN 1950 AEROSOLS, 2.1, (D)

14.3. Transport hazard class(es)

Class (ADR)	:	2
Subsidiary risk (IMDG)	:	2.1
Subsidiary risk (IATA)	:	2.1
Danger labels (ADR)	:	2.1

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information	:	No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Classification code (ADR) : 5F
Special provisions (ADR) : 190, 327, 344, 625
Transport category (ADR) : 2
Tunnel restriction code (ADR) : D
Limited quantities (ADR) : 1l

14.6.2. Transport by sea

EmS-No. (1) : F-D, S-U

14.6.3. Air transport

Instruction "cargo" (ICAO) : 203
Instruction "passenger" (ICAO) : 203/Y203

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
VOC content : 96.1 %

15.1.2. National regulations

Water hazard class (WGK) : 1 - low hazard to waters

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Aerosol 1	Aerosol, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H229	Pressurised container: May burst if heated
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
EUH208	Contains . May produce an allergic reaction

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product