

SAFETY DATA SHEET

AESUB transparent

SECTION 1: Identification

1.1. Product identifier

Trade name

AESUB transparent

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

Relevant identified uses of the substance or mixture

Industrial purposes

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Scanningspray Vertriebs GmbH

Johann-Strauss-Str. 13
45657 Recklinghausen
Germany
+49 (0)2361 8903 357
info@aesub.com

Contact person

Max Liese

E-mail

liese@aesub.com

SDS date

2023-05-30

SDS Version

1.0

1.4. Emergency telephone number

US Chemtrec: +1 800 424-9300 (24h)
CHEMTREC: +1 703 527-3887 (24h) Transport
(CCN 994267 / WISAG FMO Cargo Service GmbH &
Co. KG);

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Aerosol 1; H222, H229, Extremely flammable aerosol. Pressurised container: May burst if heated.
STOT SE 3; H336, May cause drowsiness or dizziness.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

Extremely flammable aerosol. Pressurised container: May burst if heated. (H222, H229)
May cause drowsiness or dizziness. (H336)

Precautionary statement(s)

General

-

Prevention

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

Conforms to Hazardous Products Regulations (SOR/2015-17)

Do not spray on an open flame or other ignition source. (P211)
 Do not pierce or burn, even after use. (P251)
 Avoid breathing spray. (P261)

Response

Call a POISON CENTER/doctor if you feel unwell. (P312)

Storage

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412)

Disposal

Dispose of contents/container in accordance with local regulation. (P501)

Hazardous substances

cyclopentane

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.

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
isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 0,1 % butadiene (203-450-8))	CAS No.: 106-97-8	60-80%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
propane	CAS No.: 74-98-6	15-25%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
cyclopentane	CAS No.: 287-92-3	10-15%	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336	
Cyclododecane	CAS No.: 294-62-2	5-10%		
isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 0,1 % butadiene (203-450-8))	CAS No.: 75-28-5	1-3%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	

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

Other information

None known.

SECTION 4: First-aid measures

4.1. Description of first aid measures

General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

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.

Conforms to Hazardous Products Regulations (SOR/2015-17)

Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

Eye contact

Upon irritation of the eye: Remove contact lenses and open eyes widely. Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

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 person 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

Call a POISON CENTER/doctor if you feel unwell.

Information to medics

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

SECTION 5: Fire-fighting 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 / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact a poison centre in order to obtain further advice. See section 1 "Emergency telephone number".

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.

Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

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

Because of the danger of self-ignition, any waste from the product, spray mist and soiled rags etc. are to be kept in a fire-proof place in air-tight containers, alternatively the waste is to be burned.

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

Conforms to Hazardous Products Regulations (SOR/2015-17)

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

Keep only in original packaging.

Storage temperature

< 50°C

Incompatible materials

Strong oxidizing 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

ALBERTA

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Long term exposure limit (8 hours) (ppm): 1000

propane
Long term exposure limit (8 hours) (ppm): 1000

cyclopentane
Long term exposure limit (8 hours) (ppm): 600
Long term exposure limit (8 hours) (mg/m³): 1720

Occupational Health and Safety Code 2009 Order, Alta Reg 87/2009 (revised in 2018)

BRITISH COLUMBIA

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 1000 ppm

Annotations:

EX = The substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit.

propane
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): Simple asphyxiant / Asphyxiant simples

Annotations:

EX = The substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit.

cyclopentane
Time-Weighted Average Limit (TWA): 600 ppm

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 1000 ppm

Annotations:

EX = The substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit.

OHS Regulation Part 5: Chemical Agents and Biological Agents.

ONTARIO

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 1000 ppm

propane
Time-Weighted Average Limit (TWA): 200 ppm

cyclopentane
Time-Weighted Average Limit (TWA): 600 ppm

Conforms to Hazardous Products Regulations (SOR/2015-17)

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Time-Weighted Average Limit (TWA): 5 ppm
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 10 ppm

Regulation 833 (Control of Exposure to Biological or Chemical Agents) and Ontario Regulation 490/09 (Designated Substances)

QUEBEC

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Long term exposure limit (8 hours) (ppm): 800
Long term exposure limit (8 hours) (mg/m³): 1900

propane

Long term exposure limit (8 hours) (ppm): 1000
Long term exposure limit (8 hours) (mg/m³): 1800

cyclopentane

Long term exposure limit (8 hours) (ppm): 600
Long term exposure limit (8 hours) (mg/m³): 1720

Regulation respecting occupational health and safety (Chapter S-2.1, r. 13)

SASKATCHEWAN

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Long term exposure limit (8 hours) (ppm): 1000
Short term exposure limit (15 minutes) (ppm): 1250

propane

Long term exposure limit (8 hours) (ppm): 1000
Short term exposure limit (15 minutes) (ppm): 1250

cyclopentane

Long term exposure limit (8 hours) (ppm): 600
Short term exposure limit (15 minutes) (ppm): 900

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Long term exposure limit (8 hours) (ppm): 1000
Short term exposure limit (15 minutes) (ppm): 1250

The Occupational Health and Safety Regulations, 2020, Chapter S15.1 Reg 10.

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.

Individual protection measures, such as personal protective equipment

Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment

Conforms to Hazardous Products Regulations (SOR/2015-17)

Type	Class	Colour	Standards	
Combination filter A2B2P2	Class 2	Brown/Gray/White	EN14387	
Skin protection				
Recommended	Type/Category	Standards		
Dedicated work clothing should be worn.	-	-		
Hand protection				
Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	0,7	> 240	EN374-2, EN374-3, EN388, EN421	
Eye protection				
Type	Standards			
Face shield alternatively safety glasses with side shields.	EN166			

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Aerosol

Colour

Colourless

Odour

Characteristic

Odour threshold (ppm)

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

pH

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

Density (g/cm³)

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.

Phase changes

Melting point (°C)

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

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.

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.

Evaporation rate (n-butylacetate = 100)

Data on fire and explosion hazards

Flash point (°C)

-88.6 @ 1.013 hPa

Flammability (°C)

Conforms to Hazardous Products Regulations (SOR/2015-17)

287

Auto-ignition temperature (°C)

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

Explosion limits (% v/v)

1.1 - 15

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 oxidizing 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 toxicological effects

Acute toxicity

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

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

May cause drowsiness or dizziness.

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.

Long term effects

None known.

Conforms to Hazardous Products Regulations (SOR/2015-17)

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	27,98 mg/L

Product/substance	isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Species:	Algae
Duration:	96 hours
Test:	EC50
Result:	7,71 mg/L

Product/substance	propane
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	27,98 mg/L

Product/substance	propane
Species:	Algae
Duration:	96 hours
Test:	EC50
Result:	7,71 mg/L

Product/substance	cyclopentane
Species:	Fish
Duration:	96 hours
Test:	LL50
Result:	29.3 mg/L

Product/substance	isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	27,98 mg/L

Product/substance	isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8))
Species:	Algae
Duration:	96 hours
Test:	EC50
Result:	7,71 mg/L

12.2. Persistence and degradability

Product/substance	cyclopentane
Biodegradable:	No
Test method:	
Result:	0% 28d

12.3. Bioaccumulative potential

Product/substance	propane
Test method:	
Potential bioaccumulation:	No data available.
LogPow:	1,09 (pH: 7, 20 °C)
BCF:	No data available.
Other information:	

Product/substance	cyclopentane
Test method:	
Potential bioaccumulation:	No data available.

Conforms to Hazardous Products Regulations (SOR/2015-17)

LogPow: 3 (pH: 7, 25 °C)
 BCF: 70,8
 Other information:

12.4. Mobility in soil

No data available.

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. Other adverse effects

None known.

SECTION 13: Disposal considerations

Waste treatment methods

None of the components are listed

Specific labelling

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:
DOT	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.1 Classification code: 5F 	-	No	Limited quantities: 1 L Tunnel restriction code: (D) See below for additional information.
IMDG	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.1 Classification code: 5F 	-	No	Limited quantities: 1 L EmS: F-D S-U See below for additional information.
IATA	UN1950	AEROSOLS	Transport hazard class: 2 Label: 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.

14.6. Special precautions for user

Not applicable.

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

Conforms to Hazardous Products Regulations (SOR/2015-17)

No data available.

SECTION 15: Regulatory information

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

15.2. Canadian lists

DSL / NDSL

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8)) is listed in the non-confidential portion of DSL / NDSL

propane is listed in the non-confidential portion of DSL / NDSL

cyclopentane is listed in the non-confidential portion of DSL / NDSL

isobutane (containing $\geq 0,1$ % butadiene (203-450-8));butane (containing $\geq 0,1$ % butadiene (203-450-8)) is listed in the non-confidential portion of DSL / NDSL

15.4. Restrictions for application

Restricted to professional users.

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

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education

No specific requirements.

Additional information

Not applicable.

15.7. Chemical safety assessment

No

Sources

Hazardous Products Regulations (SOR/2015-17)

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

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.

H336, May cause drowsiness or dizziness.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ANSI = American National Standards Institute

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

DSL = Domestic Substances List

NDSL = Non-domestic substances list

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HHNOC = Health Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

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

PHNOC = Physical Hazards Not Otherwise Classified

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

SCL = A specific concentration limit.

SOR = Statutory Orders and Regulations

STEL = Short-term exposure limits

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

Conforms to Hazardous Products Regulations (SOR/2015-17)

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

WHIMS = Workplace Hazardous Materials Information System

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by WHMIS 2015

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

The safety data sheet is validated by

Max Liese

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: CA-en