SAFETY DATA SHEET

AESUB diamond

SECTION 1: Identification

1.1. Product identifier

Trade name

AESUB diamond

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

Relevant identified uses of the substance or mixture

Industrial purposes
Restricted to professional users.

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

7/12/2024

SDS Version

1.0

1.4. Emergency telephone number

24 Hour Emergency Contact Phone Number
for Chemical Emergency, Spill, Leak, Fire, Exposure or Accident
Call Day and Night within USA and Canada: 1-800-424-9300
Outside USA and Canada: 001-703-527-3887

In-Country Emergency Number:
Canada: +1 703-741-5970
(CCN 994267 / WISAG FMO Cargo Service GmbH & Co. KG)

SECTION 2: Hazard(s) identification

Classified according to WHMIS 2022.

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)
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 no 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.

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	40-60%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
propane	CAS No.: 74-98-6	15-25%	Flam. Gas 1A, H220 Press. Gas (Liq.) , H280	
ethanol;ethyl alcohol	CAS No.: 64-17-5	10-15%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 (SCL: 50.00 %)	
cyclopentane	CAS No.: 287-92-3	5-10%	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336	
Tricyclo[3.3.1.13,7]decane	CAS No.: 281-23-2	1-3%		
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

-

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.

Skin contact

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

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. 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

Extremely flammable aerosol. Pressurised container. In a fire or if heated, a pressure increase will occur and the container may burst.
In use may form flammable/explosive vapour-air 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

Accidental releases always pose a serious risk of fire or explosion.
Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.
Ensure adequate ventilation, especially in confined areas.
Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions
Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

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
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Avoid contact during pregnancy and while nursing.
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
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
Dry, cool and well ventilated

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

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

ethanol;ethyl alcohol
Long term exposure limit (8 hours) (ppm): 1000
Long term exposure limit (8 hours) (mg/m^3): 1880

cyclopentane
Long term exposure limit (8 hours) (ppm): 600
Long term exposure limit (8 hours) (mg/m^3): 1720

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

BRITISH COLUMBIA
isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 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.

ethanol;ethyl alcohol
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 1000 ppm

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

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

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

ethanol;ethyl alcohol
Short-Term Exposure Limit (STEL) / Ceiling Limit (C): 1,000 ppm

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

isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 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 ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 0,1 % butadiene (203-450-8))
Long term exposure limit (8 hours) (ppm): 800
Long term exposure limit (8 hours) (mg/m^3): 1900

propane
Long term exposure limit (8 hours) (ppm): 1000
Long term exposure limit (8 hours) (mg/m^3): 1800

cyclopentane
Long term exposure limit (8 hours) (ppm): 600
Long term exposure limit (8 hours) (mg/m^3): 1720

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

SASKATCHEWAN
isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 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

ethanol;ethyl alcohol
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 ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 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. Pay special attention to 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

Type	Class	Colour	Standards
Combination filter A2B2E2K2-P2	Class 2	Brown/Gray/Yellow/Green /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/cm^3)
0,58 - 0,62 (20 °C)

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

Particle characteristics
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.

Softening point/range (°F)
Does not apply to aerosols.

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.

Relative 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.

Data on fire and explosion hazards

Flash point (°C)
-88,6 @ 1.013 hPa

Flammability (°C)
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 (LogKow)
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.

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

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
Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.
Sunlight

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.

Other information
None known.

SECTION 12: Ecological information

12.1. Toxicity

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

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

Product/substance	isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 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	ethanol;ethyl alcohol
Result:	69% 5d
Conclusion:	Readily biodegradable

Product/substance	cyclopentane
Result:	0% 28d
Conclusion:	Not biodegradable

12.3. Bioaccumulative potential

Product/substance	propane
LogKow:	1,09 (pH: 7, 20 °C)
Conclusion:	-

Product/substance	ethanol;ethyl alcohol
LogKow:	-0,77
Conclusion:	No potential for bioaccumulation

Product/substance	cyclopentane
BCF:	70,8
LogKow:	3 (pH: 7, 25 °C)
Conclusion:	-

Product/substance	Tricyclo[3.3.1.13,7]decane
LogKow:	4,24
Conclusion:	-

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

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:
TDG	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

TDG / See Schedule 1 for any information on special provisions, requirements, or warnings in connection with transport. See part 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

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 ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 0,1 % butadiene (203-450-8)) is listed
propane is listed
ethanol;ethyl alcohol is listed
cyclopentane is listed

Tricyclo[3.3.1.13,7]decane is listed
isobutane (containing ≥ 0,1 % butadiene (203-450-8));butane (containing ≥ 0,1 % butadiene (203-450-8)) is listed

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/2022-272)

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.
H319, Causes serious eye irritation.
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
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)
NDSL = Non-domestic substances list
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
TDG = Transportation of Dangerous Goods
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 2022
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 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