Safety Data Sheet

according to 29 CFR 1910.1200(g)

AESUB blue

1. Identification

Product identifier

AESUB blue

Product code:

AESBM003 (35 ml)
AESB002 (400ml)

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Coatings

Uses advised against

Do not use for products which come into contact with the food stuffs.
Do not use for private purposes (household).

Details of the supplier of the safety data sheet

Company name:	Scanningspray Vertriebs GmbH	
Street:	Johann-Strauss-Str. 13	
Place:	D-45657 Recklinghausen	
Telephone:	+49 (0)176 82 41 39 36	
e-mail:	info@aesub.com	
Contact person:	Max Liese	Telephone: +49(0)231-5868 9271
e-mail:	liese@aesub.com	
Internet:	www.aesub.com	

Emergency phone number: 24 Hour Emergency Contact Phone Number for Chemichal 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

Further Information

Emergency phone number
China: 4001-204937
(CCN 994267 / WISAG FMO Cargo Service GmbH & Co. KG)

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Gases under pressure: Compressed gas
Skin corrosion/irritation: Skin Irrit. 2
Reproductive toxicity: Repr. 2
Specific target organ toxicity single exposure: STOT SE 3 (narcotic effects)

Label elements

29 CFR Part 1910.1200

Signal word: Warning

Pictograms:

Hazard statements

Contains gas under pressure; may explode if heated
Causes skin irritation
May cause drowsiness or dizziness

Suspected of damaging fertility or the unborn child

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of Water and soap.
Take off contaminated clothing and wash it before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.
If exposed or concerned: Get medical advice/attention.
Keep container tightly closed.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.
Dispose of waste according to applicable legislation.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

CAS No	Components	Quantity
287-92-3	cyclopentane	33.77 %
64-17-5	ethanol; ethyl alcohol	15.1 %
64742-49-0	Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	8.748 %
110-54-3	n-hexane	0.2654 %

4. First-aid measures

Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Remove victim out of the danger area. Do not leave affected person unattended. Remove contaminated, saturated clothing immediately.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

After contact with skin

Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Thaw frosted parts with lukewarm water. Do not rub affected area.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water spray, BC-powder
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

Specific hazards arising from the chemical

Extremely flammable aerosol. Pressurized container: May burst if heated. Vapors may form explosive mixtures with air.
In case of fire may be liberated: Carbon dioxide (CO2), Carbon monoxide, Pyrolysis products, toxic.

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Full protection suit.
In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Supress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fume/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.
To follow: Emergency procedures. Remove persons to safety.
aerosol or mist formation: Wear respiratory protection.

Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.
Retain contaminated washing water and dispose it.

Methods and material for containment and cleaning up

Cover drains. Ventilate affected area. Use only antistatically equipped (spark-free) tools. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Collect in closed and suitable containers for disposal.

Reference to other sections

Safe handling: see section 7
Personal protection equipment (PPE): see section 8
Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Provide adequate ventilation.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use.

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapors may form explosive mixtures with air.

Further information on handling

Wash hands thoroughly after handling. When using do not eat, drink, smoke, sniff. Used working clothes should not be worn outside the work area.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.
Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Do not expose to temperatures exceeding 50 °C/122 °F. Protect against direct sunlight.

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No.	Substance	ppm	mg/m³	f/cc	Category	Origin
78-93-3	2-Butanone (Methyl ethyl ketone)	200	590		TWA (8 h)	PEL
78-93-3	2-Butanone	200	590		TWA (8 h)	REL
		300	885		STEL (15 min)	REL
75-28-5	Butane: isobutane	1000			STEL (15 min)	ACGIH-2020
106-97-8	Butane: n-butane	1000			STEL (15 min)	ACGIH-2020
-	C5 - C6 Alkanes		1500		TWA (8 h)	ACGIH-2020
-	C5 - C6 Cycloalkanes		1500		TWA (8 h)	ACGIH-2020
-	C7 - C8 Alkanes		1500		TWA (8 h)	ACGIH-2020
-	C7 - C8 Cycloalkanes		1500		TWA (8 h)	ACGIH-2020
110-82-7	Cyclohexane	300	1050		TWA (8 h)	PEL
		300	1050		TWA (8 h)	REL
		100			TWA (8 h)	ACGIH-2020
287-92-3	Cyclopentane	600	1720		TWA (8 h)	REL
		600			TWA (8 h)	ACGIH-2020
64-17-5	Ethanol	1000			STEL (15 min)	ACGIH-2020
64-17-5	Ethyl alcohol (Ethanol)	1000	1900		TWA (8 h)	PEL
64-17-5	Ethyl alcohol	1000	1900		TWA (8 h)	REL
75-28-5	Isobutane	800	1900		TWA (8 h)	REL
78-93-3	Methyl ethyl ketone	200			TWA (8 h)	ACGIH-2020
		300			STEL (15 min)	ACGIH-2020
106-97-8	n-Butane	800	1900		TWA (8 h)	REL
110-54-3	n-Hexane	500	1800		TWA (8 h)	PEL
		50	180		TWA (8 h)	REL
		50			TWA (8 h)	ACGIH-2020
74-98-6	Propane	1000	1800		TWA (8 h)	PEL
		1000	1800		TWA (8 h)	REL
		-	-		Asphyxiant	ACGIH-2020

Biological Exposure Indices (BEI-ACGIH)

CAS No.	Substance	Determinant	Value	Test material	Sampling time
110-54-3	n-HEXANE	2,5-Hexanedion (without hydrolysis)	0.5 mg/L	urine	End of shift
78-93-3	METHYL ETHYL KETONE	Methyl ethyl ketone	2 mg/L	urine	End of shift

Exposure controls





Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Protective and hygiene measures

Avoid contact with skin, eyes and clothes. Do not breathe gas/fume/vapour/spray. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection

Wear eye protection/face protection.

Hand protection

Butyl caoutchouc (butyl rubber). Thickness of glove material: 0,7 mm, penetration time (maximum wearing period): 240 min

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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Filter type: ABEK-P2

Environmental exposure controls

Avoid release to the environment.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid (Aerosol)
Color:	various
Odor:	characteristic
Odour threshold:	not determined

pH-Value:	not determined

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	- 161,5 °C
Flash point:	< - 29 °C

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

Heating may cause an explosion. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Lower explosion limits:	0,6 vol. %
Upper explosion limits:	15 vol. %
Auto-ignition temperature:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	264 °C
Decomposition temperature:	not determined

Oxidizing properties
The product is not: oxidising.

Vapor pressure: (at 20 °C)	250 hPa
Density:	not determined
Water solubility:	not determined

Solubility in other solvents
not determined

Partition coefficient n-octanol/water:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	58,29 %

Other information

Solid content:	9,072 %

Propellant content (%) 32,64

10. Stability and reactivity

Reactivity
Extremely flammable aerosol. Pressurized container: May burst if heated.

Chemical stability
Stability: Stable
The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions
Hazardous reactions: Will not occur
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Conditions to avoid
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Protect against direct sunlight.
Do not spray on an open flame or other ignition source.

Incompatible materials
Oxidising agent

Hazardous decomposition products
In case of fire may be liberated: Carbon dioxide (CO_2), Carbon monoxide, Pyrolysis products, toxic.

11. Toxicological information

Information on toxicological effects

Route(s) of Entry
Eye contact, oral, dermal, inhalative.

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

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
287-92-3	cyclopentane				
	oral	LD50 > 5000 mg/kg	Rat	Manufacturer	OECD 423
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 10170 mg/kg	Rat	Manufacturer	

Irritation and corrosivity

Causes skin irritation

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitizing effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging fertility or the unborn child (n-hexane)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

Specific target organ toxicity (STOT) - single exposure

May cause drowsiness or dizziness (cyclopentane)

Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (IARC): Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1.

Aspiration hazard

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

Practical experience

Other observations

No information available.

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms.

Harmful to aquatic life with long lasting effects.

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Mobility in soil

The product has not been tested.

Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

14. Transport information

US DOT 49 CFR 172.101

UN/ID number:	UN 1950
Proper shipping name:	AEROSOLS
Transport hazard class(es):	2.1
Hazard label:	2.1

Marine transport (IMDG)

UN number:	UN 1950
UN proper shipping name:	AEROSOLS
Transport hazard class(es):	2.1
Packing group:	-
Hazard label:	2.1

Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

UN number:	UN 1950
UN proper shipping name:	AEROSOLS, FLAMMABLE
Transport hazard class(es):	2.1
Packing group:	-
Hazard label:	2.1

Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

Warning: Extremely flammable aerosol.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

National Inventory TSCA

CAS No. 106-97-8 (butane): Yes.
CAS No. 74-98-6 (propane): Yes.
CAS No. 64742-49-0 (Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha): Yes.
CAS No. 64-17-5 (ethanol; ethyl alcohol): Yes.
CAS No. 110-54-3 (n-hexane): Yes.
CAS No. 110-82-7 (cyclohexane): Yes.
CAS No. 78-93-3 (butanone; ethyl methyl ketone): Yes.
CAS No. 75-28-5 (isobutane): Yes.
CAS No. 287-92-3 (cyclopentane): Yes.
CAS No. 110-82-7 (cyclohexane): Yes.

National regulatory information

SARA Section 304 CERCLA:
n-Hexane (110-54-3): Reportable quantity = 5,000 (2270) lbs. (kg)
Methyl ethyl ketone (78-93-3): Reportable quantity = 5,000 (2270) lbs. (kg)
Cyclohexane (110-82-7): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:
cyclopentane (287-92-3): Fire hazard, Immediate (acute) health hazard
Propane (74-98-6): Fire hazard
ethanol; ethyl alcohol (64-17-5): Fire hazard, Immediate (acute) health hazard
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha (64742-49-0): Fire hazard, Immediate (acute) health hazard
Isobutane (75-28-5): Fire hazard
Butane (106-97-8): Fire hazard
n-Hexane (110-54-3): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Methyl ethyl ketone (78-93-3): Fire hazard, Immediate (acute) health hazard
Cyclohexane (110-82-7): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:
n-Hexane (110-54-3): De minimis limit = 1.0 %, Reportable threshold = Standard
Cyclohexane (110-82-7): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(r):
Propane (74-98-6): Threshold quantities = 10,000 lbs.
Isobutane (75-28-5): Threshold quantities = 10,000 lbs.
Butane (106-97-8): Threshold quantities = 10,000 lbs.

Clean Air Act Section 112(b):
n-Hexane (110-54-3), Methyl ethyl ketone (78-93-3)

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

WARNING: This product can expose you to chemicals including n-Hexane (reproductive), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other information

Hazardous Materials Information Label (HMIS)

Health:	2
Flammability:	4

Physical Hazard:	1

NFPA Hazard Ratings

Health:	2
Flammability:	4
Reactivity:	1
Unique Hazard:	
Revision date:	02.06.2021
Revision No:	1,0

Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
CFR: Code of Federal Regulations
DOT: Department of Transportation
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IARC: International Agency for Research on Cancer
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limit
REL: recommended exposure limit
SARA: Superfund Amendments and Reauthorization Act
STEL: Short-term exposure limit
TSCA: Toxic Substances Control Act
TWA: time-weighted average
TI: Technical Instructions
DGR: Dangerous Goods Regulations
UN: United Nations
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds

Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)