

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Graffiti Remover Ink

Product no.

-

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

Graffiti Removal

Uses advised against

-

The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

Blue & Green AB
Stenorsvägen 52
261 44 Landskrona
Sweden
Tfn: +46 418 399000
Fax: +46 418 13199
www.blueandgreen.se

E-mail

info@blueandgreen.se

SDS date

2020-11-25

SDS Version

1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Liq. 2; H225

Skin Irrit. 2; H315

Eye Irrit. 2; H319

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)**Signal word**

Danger

Hazard statement(s)

Highly flammable liquid and vapour. (H225)

Causes skin irritation. (H315)

Causes serious eye irritation. (H319)

According to EC-Regulation 2015/830

Precautionary statements

General	If medical advice is needed, have product container or label at hand. (P101). Keep out of reach of children. (P102).
Prevention	Wear eye protection/gloves. (P280).
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338).
Storage	Store in a well-ventilated place. Keep cool. (P403+P235).
Disposal	Dispose of contents/container to an approved waste disposal plant. (P501).

Identity of the substances primarily responsible for the major health hazards

Not applicable

Additional labelling

Not applicable

Unique formula identifier (UFI)

JRMP-71AF-K103-A2UP

2.3. Other hazards

Not applicable

Additional warnings

Tactile warning.

VOC (volatile organic compound)

Not applicable

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	ethanol
IDENTIFICATION NOS.:	CAS-no: 64-17-5 EC-no: 200-578-6 REACH-no: 01-2119457610-43 Index-no: 603-002-00-5
CONTENT:	60-80%
CLP CLASSIFICATION:	Flam. Liq. 2, Eye Irrit. 2 H225, H319
NOTE:	O

NAME:	1-butylpyrrolidin-2-one
IDENTIFICATION NOS.:	CAS-no: 3470-98-2 EC-no: 222-437-8 REACH-no: 01-2120062728-48
CONTENT:	15 - <25%
CLP CLASSIFICATION:	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2 H302, H315, H319

(*) O = Organic solvent See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

ATEmix(oral) > 2000
 Eye Cat. 2 Sum = Sum(Ci/S(G)CLi) = 2.8784 - 4.3176
 Skin Cat. 2 Sum = Sum(Ci/S(G)CLi) = 1.6 - 2.4

Detergent:
 > 30%: ALCOHOL

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service: Dial 0344 892 0111 (24 h service). 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

Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with soap and water.

Eye contact

Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) for at least 15 minutes and

According to EC-Regulation 2015/830

continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. 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 victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until the pain stops then continue to rinse for a further 30 minutes.

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

This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

IF exposed or concerned: Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Nitrogen oxides. Carbon oxides. Fire will result in dense black smoke. Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. 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.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

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.

6.2. Environmental precautions

No specific requirements.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid static electricity. Protect electrical equipment in accordance with current standards. Do not use spark-forming tools.

Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Storage temperature

Room temperature 18 to 23°C

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

According to EC-Regulation 2015/830

8.1. Control parameters

OEL

ethanol

Long-term exposure limit (8-hour TWA reference period): 1000 ppm | 1920 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

DNEL / PNEC

DNEL (ethanol): 950 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (ethanol): 343 mg/kg bw/d

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (ethanol): 950 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - General population

DNEL (ethanol): 87 mg/kg bw/d

Exposure: Oral

Duration of Exposure: Long term – Systemic effects - General population

DNEL (ethanol): 114 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - General population

DNEL (ethanol): 206 mg/kg bw/d

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - General population

DNEL (ethanol): 1900 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - Workers

DNEL (1-butylpyrrolidin-2-one): 4mg/kg

Exposure: Oral

Duration of Exposure: Short term – Systemic effects - General population

DNEL (1-butylpyrrolidin-2-one): 4mg/kg

Exposure: Oral

Duration of Exposure: Long term – Systemic effects - General population

DNEL (1-butylpyrrolidin-2-one): 5mg/kg

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - General population

DNEL (1-butylpyrrolidin-2-one): 4.29mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - General population

DNEL (1-butylpyrrolidin-2-one): 10mg/kg

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (1-butylpyrrolidin-2-one): 24.1mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - Workers

PNEC (ethanol): 0.96 mg/l

Exposure: Freshwater

PNEC (ethanol): 0.79 mg/l

Exposure: Marine water

PNEC (ethanol): 2.75 mg/l

Exposure: Intermittent release

PNEC (ethanol): 3.6 mg/kg dw

Exposure: Freshwater sediment

PNEC (ethanol): 0.63 mg/kg dw

Exposure: Soil

According to EC-Regulation 2015/830

PNEC (ethanol): 2.9 mg/kg dw
Exposure: Marine water sediment

PNEC (ethanol): 580 mg/l
Exposure: Sewage Treatment Plant

PNEC (1-butylpyrrolidin-2-one): 3.57mg/kg
Exposure: Soil

PNEC (1-butylpyrrolidin-2-one): 2.96mg/kg
Exposure: Marine water sediment

PNEC (1-butylpyrrolidin-2-one): 29.6mg/kg
Exposure: Freshwater sediment

PNEC (1-butylpyrrolidin-2-one): 30,62 mg/L
Exposure: Sewage Treatment Plant

PNEC (1-butylpyrrolidin-2-one): 0,4mg/L
Exposure: Marine water

PNEC (1-butylpyrrolidin-2-one): 4mg/L
Exposure: Freshwater

8.2. Exposure controls

Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations

Observe general occupational hygiene standards.

Exposure scenarios

There is no appendix to this safety data sheet.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Ensure emergency eyewash and -showers are clearly marked.

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 CE marked protective equipment.

Respiratory Equipment

If ventilation at the work place is insufficient, use a half- or full mask with an appropriate filter or an air-supplied breathing apparatus depending on the specific work situation and how long you will be using the product.

Skin protection

Wear appropriate protection clothing, e.g. coveralls in polypropylene approved type 6 and Category III.

Hand protection

Nitrile rubber

Breakthrough time: > 480 minutes (Class 6)

Eye protection

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form

Liquid

Colour

No data available.

According to EC-Regulation 2015/830

Odour	No data available.
Odour threshold (ppm)	No data available.
pH	No data available.
Viscosity (40°C)	No data available.
Density (g/cm ³)	0.81
Phase changes	
Melting point (°C)	110
Boiling point (°C)	85
Vapour pressure	No data available.
Decomposition temperature (°C)	No data available.
Evaporation rate (n-butylacetate = 100)	No data available.
Data on fire and explosion hazards	
Flash point (°C)	14
Ignition (°C)	No data available.
Auto flammability (°C)	No data available.
Explosion limits (% v/v)	No data available.
Explosive properties	No data available.
Solubility	
Solubility in water	Soluble
n-octanol/water coefficient	No data available.
9.2. Other information	
Solubility in fat (g/L)	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 the section "Handling and storage".

10.3. Possibility of hazardous reactions

Nothing special

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 acids, strong bases, strong oxidizing agents, and strong reducing 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

Substance: 1-butylpyrrolidin-2-one
 Species: Rabbit
 Test: LD50
 Route of exposure: Dermal
 Result: >2000mg/kg

Substance: 1-butylpyrrolidin-2-one
 Species: Rat
 Test: LD50
 Route of exposure: Oral
 Result: 300-2000mg/kg

Substance: ethanol
 Species: Rat
 Test: LD50
 Route of exposure: Dermal
 Result: >2000 mg/kg

Substance: ethanol
 Species: Rat
 Test: LD50

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Route of exposure: Oral
Result: 10470 mg/kg

Substance: ethanol
Species: Rat
Test: LC50
Route of exposure: Inhalation
Result: 51 mg/l 4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Long term effects

This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

12.1. Toxicity

Substance: 1-butylpyrrolidin-2-one
Species: Daphnia
Test: EC50
Duration: 48h
Result: >100mg/l

Substance: 1-butylpyrrolidin-2-one
Species: Fish
Test: LC50
Duration: 96h
Result: >100mg/l

Substance: 1-butylpyrrolidin-2-one
Species: Algae
Test: EC50
Duration: 72h
Result: 130mg/l

Substance: ethanol
Species: Daphnia
Test: EC50
Duration: 48h
Result: 12340 mg/l

Substance: ethanol
Species: Fish
Test: LC50
Duration: 96h
Result: 13000 mg/l

Substance: ethanol
Species: Algae
Test: EC50
Duration: 72h
Result: 275 mg/l

12.2. Persistence and degradability

Substance
1-butylpyrrolidin-2-one
ethanol

Biodegradability
Yes
Yes

Test
No data available
CO2 Evolution Test

Result
No data available
97%

According to EC-Regulation 2015/830

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
1-butylpyrrolidin-2-one	No	1.265	No data available
ethanol	No	-0.3	0.66

12.4. Mobility in soil

1-butylpyrrolidin-2-one: Log Koc= 1.0801535, Calculated from LogPow (High mobility potential).
ethanol: Log Koc= -0.15917, Calculated from LogPow (High mobility potential).

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

Nothing special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

Waste

EWC code

-

Specific labelling

Not applicable

Contaminated packing

Contaminated packaging must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 – 14.4

This product is within scope of the regulations of transport of dangerous goods.

ADR/RID

14.1. UN number	1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3. Transport hazard class(es)	3
14.4. Packing group	III
Notes	-
Tunnel restriction code	D/E

IMDG

UN-no.	1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S.
Class	3
PG*	III
EmS	F-E, S-E
MP**	No
Hazardous constituent	-

IATA/ICAO

UN-no.	1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S.
Class	3
PG*	III

14.5. Environmental hazards

-

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Demands for specific education

According to EC-Regulation 2015/830

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Additional information

Not applicable

Seveso

Seveso III Part 1: P5c

Biocidal reg. no.

Not applicable

Sources

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.
 The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.
 Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents.
 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).
 Regulation (EC) 1907/2006 (REACH).
 The Control of Major Accident Hazards (COMAH) Regulations 2015.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225 - Highly flammable liquid and vapour.
 H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.

The full text of identified uses as mentioned in section 1

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Additional label elements

Not applicable

Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:
 The classification of the mixture in regard of physical hazards has been based on experimental data.
 The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)
 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.
 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.
 A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The safety data sheet is validated by

David Löwenstein

Date of last essential change (First cipher in SDS version)

-

Date of last minor change (Last cipher in SDS version)

-