



Safety Data Sheet according to Directive 91/155/EC

Revision Date: May 2017

1) Identification of the substance/preparation and the company

Trade Name: Brodie&Middleton Acetone

Application: Artists' Solvent

Manufacturer/Supplier:

Brodie&Middleton Ltd

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2) Hazards Identification

Classification

Classification according to Regulation (EC) No 1272/2008

<i>Hazard Class</i>	<i>Hazard Category</i>	<i>Statements</i>
Flammable liquids	Category 2	H225
Serious eye damage/eye irritation	Category 2	H319
Specific target organ toxicity - single exposure	Category 3	H336

Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard Symbols



Signal Word: Danger

Hazard Statements:	H225	Highly flammable liquid and vapour.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness

Precautionary statements

Prevention:	P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	P233	Keep container tightly closed.
	P240	Ground/bond container and receiving equipment.
	P243	Take precautionary measures against static discharge.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:	P303+P361+P353	If on skin (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
	P304 + P340	If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Storage:	P403 + P235	Store in a well-ventilated place. Keep cool.

3) Composition/Information on ingredients

Acetone	CAS No: 67-64-1
	EC No: 200-662-2

4) First Aid Measures

General advice:	Remove from exposure, lie down. Take off all contaminated clothing immediately. Wash contaminated clothing before reuse.
If inhaled:	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice.
In case of skin contact:	Wash off immediately with soap and plenty of water. Call a physician if irritation persists.
In case of eye contact:	Consult an eye specialist immediately. Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. Go to an ophthalmic hospital if possible.
If swallowed:	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice. If a person vomits when lying on his back, place him in the recovery position. Call a physician or poison control centre immediately.

Most important symptoms and effects, both acute and delayed

- Symptoms: acidosis, Control the alkaline reserve, Shortness of breath, Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. See Section 11 for more detailed information on health effects and symptoms.
- Effects: Aspiration hazard if swallowed - can enter lungs and cause damage. Aspiration may cause pulmonary oedema and pneumonitis.

Indication of any immediate medical attention and special treatment needed

- Treatment: Treat symptomatically. Later control for pneumonia and lung oedema. In case of shortness of breath, give oxygen. Artificial respiration and/or oxygen may be necessary.

5) Fire Fighting Measures

Extinguishing media

- Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media: High volume water jet
- Special hazards arising from the substance or mixture
- Specific hazards during fire fighting: Highly flammable. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Flash back possible over considerable distance. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, Carbon dioxide (CO₂).

Advice for fire fighters

- Special protective equipment for fire fighters: In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)
- Further information: Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise - with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

- Personal precautions: Use personal protective equipment. Keep away unprotected persons. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. For personal protection see section 8.

Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and Materials For Containment and Cleaning Up

Methods and materials: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Further information: Treat recovered material as described in the section 'Disposal considerations'.

7) Handling and Storage

Precautions for Safe Handling

Advice on safe handling: Keep container tightly closed. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

Conditions for Safe Storage, Including Any Incompatibilities

Requirements for storage areas and containers: Keep in an area equipped with solvent resistant flooring.

Advice on protection against fire and explosion: Combustible liquid. Keep away from sources of ignition – No smoking. Use only explosion-proof equipment. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Take measures to prevent the build-up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations.

Further information on storage conditions: Keep tightly closed in a dry and cool place. Keep away from direct sunlight. Keep in a well-ventilated place.

Advice on common storage: Keep away from food, drink and animal feedstuffs. Incompatible with oxidizing agents. See section 10.5 - Incompatible materials.

Suitable materials for containers: Mild steel; Stainless steel; polyethylene.

Unsuitable packaging materials: Plastic, copper

8) Exposure/Personal Protection

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL

Workers, Systemic effects, Skin contact Long-term exposition: 186 mg/kg bw/day

DNEL

Workers, Systemic effects, Inhalation Long-term exposition: 1210 mg/m³

DNEL

Workers, Local effects, Inhalation Short-term exposition: 2420 mg/m³

DNEL

Consumers, Systemic effects, Skin contact Long-term exposition: 62 mg/kg bw/day

DNEL

Consumers, Systemic effects, Inhalation Long-term exposition: 200 mg/m³

DNEL

Consumers, Systemic effects, Ingestion Long-term exposition: 62 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water: 10.6 mg/l

Marine water: 1.06 mg/l

Intermittent releases: 21 mg/l

Sewage treatment plant (STP): 100 mg/l

Fresh water sediment: 30.4 mg/kg

Marine sediment: 3.04 mg/kg

Soil: 29.5 mg/kg

Other Occupational Exposure Limit Values

EU ELV, Time Weighted Average (TWA): 500 ppm, 1,210 mg/m³
Indicative

EH40 WEL, Time Weighted Average (TWA): 500 ppm, 1,210 mg/m³

EH40 WEL, Short Term Exposure Limit (STEL): 1,500 ppm, 3,620 mg/m³

ELV (IE), Time Weighted Average (TWA): 500 ppm, 1,210 mg/m³
Indicative OELV

Exposure Controls

Appropriate engineering controls: Provide sufficient air exchange and/or exhaust in work rooms. Take measures to prevent the build-up of electrostatic charge.

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice: Required, if exposure limit is exceeded (e.g. OEL). In case of insufficient ventilation, wear suitable respiratory equipment complying with EN141. Breathing apparatus with filter. Recommended Filter type:AX.

In case of intensive or longer exposure use self-contained breathing apparatus.

Hand protection

Advice: Wear suitable gloves complying with EN374. The glove material has to be impermeable and resistant to the product / the substance / the preparation. As the product is a mixture of several substances, the durability of the glove materials cannot be calculated in advance and has to be tested before use. Protective gloves should be replaced at first signs of wear.

Material: butyl-rubber

Break through time: ≥ 4 h

Glove thickness: 0.5 mm

Eye protection

Advice: Tightly fitting safety goggles

Skin and body protection

Advice: Solvent resistant protective clothing

Environmental exposure controls

General advice: Do not flush into surface water or sanitary sewer system.

Avoid subsoil penetration.

If the product contaminates rivers and lakes or drains inform respective authorities.

9) Physical and chemical Properties

Form:	liquid
Colour:	colourless
Odour:	sweet, aromatic
Odour Threshold:	ca. 13 ppm
pH:	5-6 (10 g/l, 20°C)
Melting point/range:	-94.7 °C
Boiling point/boiling range:	55.8 - 56.6 °C
Flash point:	-18 °C (closed cup)
Evaporation rate:	Currently we do not have any information from our supplier about this.
Flammability (solid, gas):	Highly flammable.
Upper explosion limit:	13.0 %(V)
Lower explosion limit:	2.1 %(V)
Vapour pressure:	240 hPa (20 °C) 800 hPa (50 °C)
Relative vapour density:	2.0
Density:	0.791 g/cm ³ (20 °C)
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	log Kow -0.24 (measured)
Auto-ignition temperature:	465 °C
Thermal decomposition:	Currently we do not have any information from our supplier about this.
Viscosity, dynamic:	0.33 mPa.s (20 °C)

Explosivity:	Formation of explosive air/vapour mixtures is possible.
Oxidizing properties:	not oxidising
Other information	
Molecular weight:	58.09 g/mol
Refractive index:	1.358 - 1.359

10) Stability and Reactivity

Reactivity

Advice: Combustibles vapours may form with air. Take measures to prevent the build-up of electrostatic charge. Vapours are heavier than air and may spread along floors.

Chemical stability

Advice: No decomposition if stored and applied as directed.

Possibility of hazardous reactions

Hazardous reactions: No information available.

Conditions to avoid

Conditions to avoid: Keep away from heat and sources of ignition. Keep away from direct sunlight.

Thermal decomposition: Currently we do not have any information from our supplier about this.

Incompatible materials

Materials to avoid: Strong reducing agents, Oxidizing agents, Halogenated compounds, Alkali metals, Ethanolamine, Hydrogen peroxide. Attacks certain plastics and rubbers.

Hazardous decomposition products

Hazardous decomposition products: Carbon monoxide, Carbon dioxide (CO₂).

11) Toxicological Information

Acute Toxicity

Oral

LD50: 5800 mg/kg (rat)

Cause pain in mouth and throat, nausea, vomiting, dizziness, headache and risk of unconsciousness.

Inhalation

LC50: ca. 76 mg/l (rat; 4 h)

May cause pain in nose and throat, nausea, dizziness, headache, deteriorate reactivity and at high concentration unconsciousness.

Dermal

LD50: > 15800 mg/kg (rabbit)

Irritation

Skin Result: Repeated exposure may cause skin dryness or cracking.
Eyes Result: Irritating to eyes. (rabbit)
May cause corneal damage.

Sensitisation

Result: not sensitizing (guinea pig)

CMR Properties

Carcinogenicity: Animal testing did not show any carcinogenic effects.

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
In vivo tests did not show mutagenic effects.

Teratogenicity: Causes developmental effects in animals at high doses.

Reproductive toxicity: Animal testing did not show any effects on fertility.

Further information

Experience with human exposure: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Chronic exposure may cause dermatitis. Chronic inhalation causes tiredness, headache and rhinitis.

12) Ecological Information

Acute Toxicity

Result: The product is not classified as dangerous for the environment.

Fish

LC50: 5540 mg/l (Oncorhynchus mykiss; 96 h)

LC50: 11000 mg/l (Alburnus alburnus; 96 h)

Toxicity to daphnia and other aquatic invertebrates

LC50: 8800 mg/l (Daphnia magna; 48 h)

Algae

NOEC: 430 mg/l (algae; 96 h)

Chronic toxicity

Aquatic invertebrates

2212 mg/l (Daphnia magna (Water flea); 28 d)

Persistence and degradability

Persistence

Result: decomposition by hydrolysis.

Biodegradability

Result: 91 % (Exposure Time: 28 d)(OECD 301 B)

Readily biodegradable

Bioaccumulative Potential

Result: log Kow -0.24
BCF: 3 (BCFWIN-software)
Bioaccumulation is not expected.

Mobility in Soil

Mobility: The product evaporates readily.
Water: The product is water soluble.
Soil: Mobile in soils

Results of PBT and vPvB Assessment

Result: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Other Adverse Effects

Biochemical Oxygen Demand (BOD)
Result: 1760 mg/g (Incubation time: 5 d)

Chemical Oxygen Demand (COD)
Result: 2100 mg/g

Additional ecological information

Result: Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

13) Disposal Information

Waste Treatment Methods

Product: Disposal together with normal waste is not allowed.
Special disposal required according to local regulations.
Do not let product enter drains. Contact waste disposal services.

Contaminated packaging: Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Do not burn, or use a cutting torch on, the empty drum. Risk of explosion.

Dispose in accordance with all applicable local & national regulations.

14) Transport Information

UN number: 1090

UN proper shipping name	ADR:	ACETONE
	RID:	ACETONE
	IMDG:	ACETONE

Transport Hazard Class(es)

ADR-Class (Labels; Classification Code; Hazard identification No; Tunnel restriction code): 3 3; F1; 33; (D/E)

RID-Class (Labels; Classification Code; Hazard identification No):

3 3; F1; 33

IMDG-Class (Labels; EmS): 3 3; F-E, S-D

Packaging group

ADR: II

RID: II

IMDG: II

Environmental hazards

Labeling according to 5.2.1.8 ADR: no

Labeling according to 5.2.1.8 RID: no

Labeling according to 5.2.1.6.3 IMDG: no

Classification as environmentally hazardous according to 2.9.3 IMDG: no

Classified as "P" according to 2.10 IMDG: no

15) Regulatory Information

Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

16) Other information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations.

To best of our knowledge the information contain herein is accurate. However, neither the above supplier assumes any liability whatsoever for the accuracy or completeness of the information herein

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist