Safety Data Sheet according to Regulation (EC) No. 1907/2006

Revision Date: June 2016

1) Identification of the substance/preparation and the company

Trade Name: Brodie&Middleton Cellulose Thinners

Application: Artists' and Theatrical Paint Thinners

Manufacturer/Supplier:

Brodie&Middleton Ltd

30-31 Store Street

London WC1E 7QE

Telephone: 020-7836 3289

Fax: 020-7636 8733

2) Composition/Information on ingredients

Substances.

Information not relevant.

Mixtures.

Contains:

Identification. Conc. %. Classification 67/548/EEC. Classification 1272/2008 (CLP).

XYLENE (MIXTURE OF ISOMERS)

CAS 1330-20-7 EC. 215-535-7 INDEX. 601-022-00-9	58 - 62	R10, Xn R20/21, Xi R38, Note C	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Note C

N-BUTYL ACETATE

CAS. 123-86-4 EC. 204-658-1 INDEX. 607-025-00-1	6 – 7	R10, R66, R67	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
BUTANOL			
CAS. 71-36-3 EC. 200-751-6 INDEX. 603-004-00-6	6 – 7	R10, R67, Xn R22, Xi R37/38, Xi R41	Flam. Liq. 3 H226, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
1-METHOXY-2-PROPANOL			
CAS. 107-98-2 EC. 203-539-1 INDEX. 603-064-00-3	2 - 2.5	R10, R67	Flam. Liq. 3 H226, STOT SE 3 H336

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

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3) Hazards Identification

Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Flam. Liq. 3	H226
Acute Tox. 4	H312+H332
Eye Dam. 1	H318
Skin Irrit. 2	H315
STOT SE 3	H336

67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:

Xn

R phrases:

10-20/21-38-66

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words:	Danger

Hazard statements:

H226	Flammable liquid and vapour.
H312+H332	Harmful in contact with skin or if inhaled.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P233	Keep container tightly closed.
P264	Wash thoroughly after handling.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor / physician.

Contains:
BUTANOL
N-BUTYL ACETATE
XYLENE (MIXTURE OF ISOMERS).

Other hazards.

Information not available.

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4) First Aid Measures

First Aid Measures

EYES:	Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN:	Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION:	Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION:	Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

Most important symptoms and effects, both acute and delayed

For symptoms and effects caused by the contained substances, see chap. 11.

Indication of any immediate medical attention and special treatment needed

Information not available.

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5) Fire Fighting Measures

Extinguishing media

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

Unsuitable Extinguishing Equipment

Do not use jets of water.

Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions

Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

Advice for firefighters

General Information

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

Special Protective Equipment for Fire-Fighters

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

Methods and material for containment and cleaning up

Collect the leaked product into a suitable container.
Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Check incompatibility for container material in section 7.
Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7) Handling and Storage

Precautions for safe handling:

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Specific end use(s)

Artists' and general brushing cellulose thinner.

Exposure/Personal Protection

Control parameters

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	IRL	221	50	442	100	
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	
WEL	UK	220	50	441	100	

N-BUTYL ACETATE

TLV-ACGIH		713	150	950	200	
OEL	IRL	710	150	950	200	
WEL	UK	724	150	966	200	

1-METHOXY-2-PROPANOL

TLV-ACGIH		369	100	553	150	
OEL	EU	375	100	568	150	SKIN
OEL	IRL	375	100	568	150	
WEL	UK	375	100	560	150	SKIN

BUTANOL

TLV-ACGIH		61	20			
OEL	IRL	20				SKIN
WEL	UK			154	50	SKIN

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

Environmental exposure controls.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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9) Physical and chemical Properties

Information on basic physical and chemical properties

Appearance	Not available.
Colour	Not available.
Odour	Not available.
Odour threshold	Not available.
pH.	Not available.
Melting point / freezing point	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	> 23°C.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	0.869 Kg/l
Solubility	Not available.

Partition coefficient: n-octanol/water: Not available.

Auto-ignition temperature.	Not available.

Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

Other information

Information not available.

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10) Stability and Reactivity

Reactivity:

There are no particular risks of reaction with other substances in normal conditions of use.

BUTANOL: attacks various types of plastic.

1-METHOXY-2-PROPANOL: absorbs and dissolves in water and in organic solvents, dissolves various plastic materials; it is stable but with air it may slowly form explosive peroxides.

N-BUTYL ACETATE: decomposes readily with water, especially when warm.

Chemical stability:

The product is stable in normal conditions of use and storage.

Possibility of hazardous reactions:

The vapours may also form explosive mixtures with the air.

XYLENE (MIXTURE OF ISOMERS): stable, but may develop violent reactions in the presence of strong oxidising agents such as sulphuric and nitric acids and perchlorates. May form explosive mixtures with the air.

BUTANOL: reacts violently developing heat with: aluminium, strong oxidising agents, strong reducing agents, hydrochloric acid. Forms explosive mixtures with the air.

1-METHOXY-2-PROPANOL: can react dangerously with strong oxidising agents and strong acids.

N-BUTYL ACETATE: risk of explosion on contact with: strong oxidising agents. Can react dangerously with alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with the air.

Conditions to avoid:

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

BUTANOL: avoid exposure to sources of heat and naked flames.

1-METHOXY-2-PROPANOL: avoid exposure to the air.

N-BUTYL ACETATE:	avoid exposure to moisture, sources of heat and naked flames.

Incompatible materials.

1-METHOXY-2-PROPANOL:	oxidising agents, strong acids and alkaline metals.
N-BUTYL ACETATE:	water, nitrates, strong oxidising agents, acids and alkalis and potassium tert-butoxide.

Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

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11) Toxicological Information

Information on toxicological effects:

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.
Acute effects: inhalation and cutaneous absorption of this product are harmful. This product may irritate mucosas, the upper respiratory tract, and eyes. Exposure symptoms may include: stinging and irritated eyes, mouth, nose, throat; cough, respiratory disorders, dizziness, headache, nausea and sickness.
In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Upon contact with skin, this product may irritate it, causing an increase in skin temperature, swelling and itchiness. Ingestion of even small amounts of this product may cause health problems (stomach pain, nausea, sickness, diarrhoea).
This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.
Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Vapour inhalation may slightly irritate the upper respiratory trait. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.
This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

XYLENE (MIXTURE OF ISOMERS): has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

1-METHOXY-2-PROPANOL: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

N-BUTYL ACETATE: in humans the substance's vapours cause irritation to the eyes and nose. In the event of repeated exposure, there is skin irritation, dermatosis (with dryness and flaking of the skin) and keratitis.

XYLENE (MIXTURE OF ISOMERS)
LD50 (Oral). 3523 mg/kg Rat
LD50 (Dermal). 4350 mg/kg Rabbit
LC50 (Inhalation). 26 mg/l/4h Rat

BUTANOL
LD50 (Oral). 790 mg/kg Rat
LD50 (Dermal). 3400 mg/kg Rabbit
LC50 (Inhalation). 8000 ppm/4h Rat

1-METHOXY-2-PROPANOL
LD50 (Oral). 5300 mg/kg Rat
LD50 (Dermal). 13000 mg/kg Rabbit
LC50 (Inhalation). 54.6 mg/l/4h Rat

N-BUTYL ACETATE
LD50 (Oral). > 6400 mg/kg Rat
LD50 (Dermal). > 5000 mg/kg Rabbit
LC50 (Inhalation). 21.1 mg/l/4h Rat

12) Ecological Information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

Toxicity: No data available
Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.
Results of PBT and vPvB assessment: On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.
Other adverse effects: No data available.

13) Disposal Information

Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Avoid littering. Do not contaminate soil, sewers and waterways.
Waste transportation may be subject to ADR restrictions

Contaminated Packaging

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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14) Transport Information

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class:	3	UN:	1263
Packing Group:	III		
Label:	3		
Nr. Kemler:	30		
Limited Quantity.	5 L		
Tunnel restriction code.	(D/E)		
Proper Shipping Name:	PAINT or PAINT RELATED MATERIAL		

Carriage by sea (shipping):

IMO Class:	3	UN:	1263
Packing Group:	III		
Label:	3		
EMS:	F-E ,	S-E	
Marine Pollutant.	NO		
Proper Shipping Name:	PAINT or PAINT RELATED MATERIAL		

Transport by air:

IATA:	3	UN:	1263
Packing Group:	III		
Label:	3		
Cargo:			
Packaging instructions:	365	Maximum quantity:	220 L
Pass.:			

Packaging instructions:	355	Maximum quantity:	60 L
Special Instructions:	A3, A72, A192		
Proper Shipping Name:	PAINT or PAINT RELATED MATERIAL.		

15) Regulatory Information

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

Seveso category. 6

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product. Point. 3 - 40

Substances in Candidate List (Art. 59 REACH). None.

Substances subject to authorisation (Annex XIV REACH). None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None.

Substances subject to the Rotterdam Convention: None.

Substances subject to the Stockholm Convention: None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

16) Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312+H332	Harmful in contact with skin or if inhaled.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R10	FLAMMABLE.

R20/21	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
R22	HARMFUL IF SWALLOWED.
R37/38	IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
R38	IRRITATING TO SKIN.
R41	RISK OF SERIOUS DAMAGE TO EYES.
R66	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

Legend:

ADR: European Agreement concerning the carriage of Dangerous goods by Road
CAS NUMBER: Chemical Abstract Service Number
CE50: Effective concentration (required to induce a 50% effect)
CE NUMBER: Identifier in ESIS (European archive of existing substances)
CLP: EC Regulation 1272/2008
DNEL: Derived No Effect Level
EmS: Emergency Schedule
GHS: Globally Harmonized System of classification and labeling of chemicals
IATA DGR: International Air Transport Association Dangerous Goods Regulation
IC50: Immobilization Concentration 50%
IMDG: International Maritime Code for dangerous goods
IMO: International Maritime Organization
INDEX NUMBER: Identifier in Annex VI of CLP
LC50: Lethal Concentration 50%
LD50: Lethal dose 50%
OEL: Occupational Exposure Level
PBT: Persistent bioaccumulative and toxic as REACH Regulation
PEC: Predicted environmental Concentration
PEL: Predicted exposure level
PNEC: Predicted no effect concentration
REACH: EC Regulation 1907/2006
RID: Regulation concerning the international transport of dangerous goods by train
TLV: Threshold Limit Value
TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
TWA STEL: Short-term exposure limit
TWA: Time-weighted average exposure limit
VOC: Volatile organic Compounds
vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
WGK: Water hazard classes (German).

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