



Material Safety Data Sheet

According to 1907/2006/EC, Article 31

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Version number 7

Issue: 06.02.2018

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

1.1 Product identifier

Trade name: **BalcoNano Coating**

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

No further relevant information available.

Application of the substance / the mixture: Coating for glass / ceramics

1.3 Details of the supplier of the safety data sheet

* Manufacturer/Supplier:

Balconette

Unit 6 Systems House, Eastbourne Road, Blindley Heath

RH76JP Lingfield, Surrey

Great Britain

Tel.: 01342-410411

Fax: 01342-410412

E-Mail: Enquiries@balconette.co.uk

Further information obtainable from: Department laboratory

1.4 Emergency telephone number: local hospital

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.



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SECTION 3: Composition/information on ingredients

3.2 Mixture

Description: Mixture of substances listed below with non-hazardous additions.

Dangerous components :			
CAS : 64-17-5 EINECS : 200-578-6 Index number : 603-002-00-5 Reg.nr. : 01-2119457610-43	ethanol	Flam. Liq. 2, H225; Eye Irrit. 2, H319	>80 %
CAS : 78-93-3 EINECS : 201-159-0 Index number : 606-002-00-3 Reg.nr. : 01-2119457290-43	butanone	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	0.1-1%
CAS : 78-10-4 EINECS : 201-083-8 Index number : 014-005-00-0 Reg.nr. : 01-2119496195-28	tetraethyl orthosilicate	Flam. Liq. 3, H226; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-1%
CAS : 7647-01-0 EINECS : 231-595-7 Index number : 017-002-00-X Reg.nr. : 01-2119484862-27-xxxx	hydrochloric acid	Met. Corr. 1, H290; Skin Corr. 1B, H314; STOT SE 3, H335	<0.1 %

SVHC

None of the ingredients is listed.

Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: Take affected persons into fresh air and keep quiet. Inhale corticosteroid controlled dosage aerosol.

After skin contact: Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Administer medicinal carbon. Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet.



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5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Hydrogen chloride (HCl)

5.3 Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.

Additional information: Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources.

Wear protective clothing.

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders)

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special precautions are necessary if used correctly.

Information about fire- and explosion protection:

Keep ignition sources away – Do not smoke.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Flammable gas-air mixtures may form in empty receptacles.

7.2 Conditions for safe storage, including any incompatibilities:

Storage

Requirements to be met by storerooms and receptacles: Store in a cool location. Unsuitable material for receptacle: aluminium.

Information about storage in one common storage facility: Do not store together with oxidizing materials.

Further information about storage conditions: Keep receptacles tightly sealed. Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s):

No further relevant information available.

SECTION 8: Exposure controls / personal protection

Additional information about design of technical facilities:

No further data; see item 7.



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8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
64-17-5 ethanol	
WEL (Great Britain)	Long-term value: 1920 mg/m ³ , 1000 ppm
78-93-3 butanone	
WEL (Great Britain)	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
IOELV (European Union)	Short-term value: 900 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm
78-10-4 tetraethyl orthosilicate	
IOELV (European Union)	Long-term value: 44 mg/m ³ , 5 ppm
7647-01-0 hydrochloric acid	
WEL (Great Britain)	Short-term value: 8 mg/m ³ , 5 ppm Long-term value: 2 mg/m ³ , 1 ppm (gas and aerosol mists)
IOELV (European Union)	Short-term value: 15 mg/m ³ , 10 ppm Long-term value: 8 mg/m ³ , 5 ppm

Regulatory information: WEL (Great Britain): EH40/2011
IOELV (European Union): (EU) 2017/164

DNELs		
64-17-5 ethanol		
Oral	DNEL (Long-term - systemic effects)	87 mg/kg bw/day (general population)
Dermal	DNEL (Long-term - systemic effects)	343 mg/kg bw/day (worker)
Inhalative	DNEL (Long-term - systemic effects)	206 mg/kg bw/day (general population)
		950 mg/m ³ (worker)
	DNEL (Short-term - local effects)	114 mg/m ³ (general population) 1900 mg/m ³ (worker) 950 mg/m ³ (general population)

PNECs		
64-17-5 ethanol		
Oral	PNEC	0.72 mg/kg food
	PNEC	580 mg/l (sewage treatment plant)
	PNEC	0.63 mg/kg (ground)
	PNEC aqua	0.79 mg/l (sea water)
		2.75 mg/l (intermittent releases)
		0.96 mg/l (freshwater)

Ingredients with biological limit values:	
78-93-3 butanone	
BMGV (Great Britain)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

Regulatory information: BMGV (Great Britain): EH40/2011

Additional information: The lists valid during the making were used as basis.

Tradename: BalcoNano Coating**8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Short term filter device:

Combination Filter

Protection of hands:

Protective gloves (EN 374)

Material of gloves

Butyl rubber, BR

Penetration time of glove material

Value for the permeation: Level ≥ 6 (Breakthrough time: > 480min.)

The data are based on literature and information provided by glove manufacturers or are derived from similar substances or products by analogy.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Eye protection:

Tightly sealed goggles.

Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General information****Appearance:**

Form:

Fluid

Colour:

Colourless

Odour:

Alcohol-like

Odour threshold:

Not determined.

pH-value:

1.7 (DIN 19268)

Change in condition

Melting point/freezing point:

undetermined

Initial boiling point and boiling range:

78°C

Flash point:

12°C

Ignition temperature:

425°C

Auto-ignition temperature:

Product is not self-igniting.

Explosive properties:

Product is not explosive. However, formation of explosive air / vapour mixtures are possible.



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Explosion limits:

Lower: 3.5 Vol %
Upper: 15.0 Vol %
Vapour pressure at 20°C: 60hPa
Density at 20°C: 0.82 g/cm³ (DIN 51757)

Solubility in / Miscibility with

Water: Fully miscible.
Organic solvents: 89%
VOC (EU): 89.27%

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

High temperatures.

10.3 Possibility of hazardous reactions:

Reacts with acids.
Reacts with oxidizing agents.
Reacts with alkaline metals.
Reacts with earth alkaline metals.

10.4 Conditions to avoid:

Keep away from heat / sparks / open flames / hot surfaces. Do not smoke.

10.5 Incompatible materials:

No further relevant information available.

10.6 Hazardous decomposition products:

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

LD/LC50 values relevant for classification:

64-17-5 ethanol

Oral	LD ₅₀	10470 mg/kg (rat) (OECD 401)
Inhalative	LC ₅₀ / 4h	117 - 125 mg/l (rat)

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

Subacute to chronic toxicity:

64-17-5 ethanol

Oral	NOAEL (90d)	1760 mg/kg/day (rat) (OECD 408) Target organ: liver
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Additional toxicological information:

The product was not tested. The statements is derived from the characteristics of the single components.



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CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

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.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

64-17-5 ethanol

LC ₅₀ /48h	8140 mg/l (Leuciscus idus)
EC ₅₀ /48h	> 100 mg/l (Daphnia magna)

12.2 Persistence and degradability

No further relevant information available.

Other information: No data available.

12.3 Bio-accumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment measures

Recommendation:

After consultation with the waste disposal facility operator or the pertinent authorities and adhering to the necessary technical regulations the product has to be disposed of in an incinerator.

Waste disposal key:

The allocation of the waste disposal key number is to be executed after the European refuse catalogue industry and process specifically.

Uncleaned packaging:

Recommendation:



Empty contaminated packagings thoroughly. They may be recycled after a thorough and proper cleaning.

Recommended cleansing agents:

Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

14.1 UN-Number	UN1170
ADR, IMDG, IATA	
14.2 UN proper shipping name	
ADR	UN1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IATA	ETHANOL SOLUTION
14.3 Transport hazard class(es)	
ADR	
	
Class	3 (F1) Flammable liquids.
Label	3
<hr/>	
IMDG, IATA	
	
Class	3 Flammable liquids.
Label	3
14.4 Packing group	II
ADR, IMDG, IATA	
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler):	33
EMS-Number:	F-E, S-D
Stowage Category	A
14.7 Transport in bulk according Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
<hr/>	
ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
<hr/>	
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN „Model Regulation“	UN1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II



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SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - Annex I: None of the ingredients is listed.

Seveso category: P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t

REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3

National regulations

Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

Breakdown regulations:

Critical quantity values according to the regulations on accidents should be adhered to.

Technical instructions (air):

Class	Share in %
NK	>80

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H225 Highly flammable liquid or vapour.
- H225 Flammable liquid or vapour.
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.

Department issuing MSDS: Department laboratory.

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent



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PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids - Category 2
Flam. Liq. 3: Flammable liquids - Category 3
Met. Corr. 1: Corrosive to metals - Category 1
Acute Tox. 4: Acute toxicity - Category 4
Skin Corr. 1B: Skin corrosion/irritation - Category 1B
Eye Irrit. 2: Serious eye damage/eye irritation - Category 2
STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

*** Data compared to the previous version altered.**