

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name 1,4 Dioxan CAS No. 123-91-1 204-661-8 EC No.

REACH Registration No.

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

Identified Use(s) PC21 Laboratory chemicals

Uses Advised Against Not known. 1.3 Details of the supplier of the safety data sheet

Manufacturer

Company Identification Rathburn Chemicals Ltd Address of Manufacturer 6 Caberston Road Walkerburn Peeblesshire

Scotland EH43 6AU

Postal code

00 (44) (0) 1 896 870 651 Telephone: sales@rathburn.co.uk E-mail

Office hours 09.00-17.00

Supplier

Postal code

Company Identification Rathburn Chemicals Ltd Address of Supplier 6 Caberston Road Walkerburn Peeblesshire

Scotland **EH43 6AU**

Telephone: 00 (44) (0) 1 896 870 651 E-mail sales@rathburn.co.uk Office hours 09.00-17.00

1.4 Emergency telephone number

00 (44) (0) 1 896 870 651 or 07807 520501 Emergency Phone No.

Roddy Stoddart Contact

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Carc. 2: Suspected of causing cancer.

Eye Irrit. 2 : Causes serious eye irritation. Flam. Liq. 2: Highly flammable liquid and vapour. STOT SE 3 : May cause respiratory irritation.

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

1,4 Dioxan **Product Name**

Hazard Pictogram(s)

Signal Word(s)







GHS02

Danger

Hazard Statement(s) H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation. H335: May cause respiratory irritation. H351: Suspected of causing cancer.



EUH019: May form explosive peroxides.

EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statement(s) P201: Obtain special instructions before use.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P233:Keep container tightly closed.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P281: Use personal protective equipment as required.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313: IF exposed or concerned: Get medical advice/attention.

P307+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foamto

extinguish.

2.3 Other hazards

None known.

2.4 Additional Information

For full text of H/P Statements see section 16.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

HAZARDOUS INGREDIENT(S)		EC No. / REACH Registration No.	%W/W	- (-)	Hazard Pictogram(s)
1,4-dioxane	123-91-1	204-661-8		Eye Irrit. 2 H319	GHS02 GHS08 GHS07

3.2 Mixtures

Not applicable.

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation Remove person to fresh air and keep comfortable for breathing. Call a POISON

CENTER/doctor if you feel unwell.

Skin Contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing. If eye irritation persists: Get medical

advice/attention.

Ingestion Treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed

May cause irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Call a POISON CENTER/doctor if you feel unwell. Treat symptomatically.

5. SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media As appropriate for surrounding fire.

Unsuitable extinguishing media Water jet spray
5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. May decompose in a fire, giving off toxic and

irritant vapours.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire

area because they are likely to rupture under fire conditions.



6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure full personal protection (including respiratory protection) during removal of spillages.

6.2 Environmental precautions

Spillages or uncontrolled discharges into watercourses must be alerted to the

appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material. Use vacuum equipment for collecting spilt materials, where practicable. Containers must not be

punctured or destroyed by burning, even when empty.

6.4 Reference to other sections

See Also Section 8, 13.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash hands and exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly

closed. Ambient.

Storage temperature Storage life

Stable under normal conditions.

Incompatible materials None known.

7.3 Specific end use(s)

PC21 Laboratory chemicals

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

Occupational Exposure Limits										
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note				
1,4-Dioxane	123-91-1	20	73			Sk				
1,4 Dioxane	123-91-1	20	73			IOELV				

Region Source

Europe EU Occupational Exposure Limits
United Kingdom Workplace Exposure Limits (WEL)

Remark Notes

Sk Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic

toxicity

IOELV IOELV: Indicative Occupational Exposure Limit Value

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use non-sparking ventilation systems, approved explosion-proof equipment, and

intrinsically safe electrical systems. Use with ventilation, local exhaust ventilation or breathing protection. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment

RATHBURN



Eye Protection Wear eye protection with side protection (EN166).



Skin protection Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection

Normally no personal respiratory protection is necessary.



Thermal hazards None known.

3.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance Liquid.
Colour : Colourless

Odour specific Odour threshold Not known. Not known. Melting point/freezing point 12C Initial boiling point and boiling range 101C Flash Point 12C Evaporation rate Not known. Flammability (solid, gas) Not known. Upper/lower flammability or explosive Not known.

limits
Vapour pressure
Vapour density
Density (g/ml)
Relative density
Not known.
Not known.
Not known.
1.03g/ml

Solubility(ies) Solubility (Water) : Completely soluble in water.

Solubility (Other): Not known.

Partition coefficient: n-octanol/water
Auto-ignition temperature
Decomposition Temperature (°C)
Viscosity
Explosive properties
Oxidising properties
Not known.
Not known.
Not known.

9.2 Other information

None.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None anticipated.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid

Avoid friction, sparks, or other means of ignition.



10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion
Acute toxicity - Skin Contact
Acute toxicity - Inhalation
Skin corrosion/irritation

Not classified.
Not classified.
Not classified.
Not classified.

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitization data
Respiratory sensitization data
Not classified.
Not classified.
Germ cell mutagenicity
Not classified.

Carcinogenicity Suspected of causing cancer.

Reproductive toxicity Not classified. Lactation Not classified.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure Not classified. Aspiration hazard Not classified.

11.2 Other information

Not known.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Fish

Toxicity - Algae

Toxicity - Sediment Compartment

Toxicity - Terrestrial Compartment

Low toxicity to fish.

Low toxicity to algae.

Not classified.

Not classified.

12.2 Persistence and Degradation

Not known.

12.3 Bioaccumulative potential

Not known.

12.4 Mobility in soil

Not known.

12.5 Results of PBT and vPvB assessment

Not known.

12.6 Other adverse effects

Not known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Do not allow to enter drains, sewers or watercourses. Do NOT landfill. Normal disposal is via incineration operated by an

watercourses. Do NOT landfill. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection

point.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

UN No. 1165

14.2 UN proper shipping name

Revision: 1

UN proper shipping name DIOXANE

14.3 Transport hazard class(es) ADR/RID Class

3 **IMDG Class**

IMDG EMS Not available

ICAO/IATA

Excepted Quantities Passenger and Cargo Aircraft Limited Y341 **Quantities Packing Instructions** Passenger and Cargo Aircraft Limited 1L

Quantities Max net Qty

Passenger and Cargo Aircraft Packing 353

Instructions

Passenger and Cargo Aircraft Max net 5L

Qty

Cargo Aircraft Packing Instructions 364 Cargo Aircraft Max net Qty 60L

Special Provisions Not applicable

Emergency Response Guidebook (ERG) 3L

Code

ADR Classification Code ADR HIN 33 **ADR Transport Category** 2 **Tunnel Restriction Code** D/E **Emergency Action Code** •2YE

APP Advice on Additional Personal Not applicable

Protection (APP)

14.4 Packing group

Packing group Labels 3



Special Provisions Not applicable

Limited Quantities 1 L **Excepted Quantities** E2

P001 IBC02 R001 Mixed Packing Instructions for Packages Special Packing Provisions for Packages Not applicable Mixed Packing Instructions for Packages

14.5 Environmental hazards

Environmental hazards Not known.

14.6 Special precautions for user

Special precautions for user Not known.

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

Packing Instructions for Portable Tanks Special Provisions for Portable Tanks TP1 Tank Code for Tanks **LGBF** Special Provisions for Tanks Not applicable Vehicle for Tank Carriage Special Provisions for Carriage -Not applicable

Packages

Special Provisions for Carriage - Bulk Not applicable Special Provisions for Carriage - Loading, Not applicable

Unloading and Handling

Special Provisions for Carriage -S2 S20

Operation

15. SECTION 15: REGULATORY INFORMATION

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

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very Not listed High Concern for Authorisation REACH: ANNEX XIV list of substances



subject to authorisation

REACH: Annex XVII Restrictions on the 1,4-dioxane (123-91-1)

manufacture, placing on the market and use of certain dangerous substances,

mixtures and articles

Community Rolling Action Plan (CoRAP) Not listed Regulation (EC) N° 850/2004 of the Not listed

European Parliament and of the Council

on persistent organic pollutants

Regulation (EC) N° 2037/2000 on

substances that deplete the ozone layer

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of

hazardous chemicals **National regulations**

15.2 Chemical Safety Assessment

Not listed

Not listed

Not known.

A REACH chemical safety assessment has not been carried out.

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Hazard Pictogram(s)







Hazard Statement(s)

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H351: Suspected of causing cancer. EUH019: May form explosive peroxides.

EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statement(s)

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking. P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

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

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash hands and exposed skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

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

P281: Use personal protective equipment as required.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep 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.



P308+P313: IF exposed or concerned: Get medical advice/attention.

P312: Call a POISON CENTER/doctor if you feel unwell.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use water to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents in accordance with local, state or national legislation. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR: European Agreement concerning the International Carriage of Dangerous

Goods by Road

CAS: Chemical Abstracts Service

CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of

substances and mixtures

DNEL : Derived No Effect Level EC : European Community

EINECS: European Inventory of Existing Commercial Chemical Substances

IATA: International Air Transport Association

IBC: Intermediate Bulk Container

ICAO : International Civil Aviation Organization IMDG : International Maritime Dangerous Goods

LTEL: Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic PNEC : Predicted No Effect Concentration

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit STOT: Specific Target Organ Toxicity

UN: United Nations

vPvB: very Persistent and very Bioaccumulative

Disclaimers

Acronyms

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