

Gist-brocades

Conform 91/155/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

06042650

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Diacetyl
Common chemical name : 2,3-Butanedione
Synonyms : Diacetyl
Chemical formula : C₄H₆O₂
Product code (Supplier) : ZZ
CAS Number : 431-03-8
EINECS Number : 207-069-8

Authorised New Zealand Distributor
Med-Chem Ingredients Limited
Med-Chem Ingredients Limited, 125 Argus Avenue, St Lukes, PO Box 37 400, Parnell
Auckland, New Zealand. Telephone 38 245 2400. Facsimile 38 245 2350
Out of Auckland call Toll Free 0800 90 99 24

Supplier : Gist-brocades bv.
Savoury Ingredients Group.
P.O. Box 1 - 2600 MA Delft - The Netherlands.
Phone: (31) 152792452, telex 38103 gbnl, fcd/s'g
Telefax: (31) 152793850.
Emergency telephone : (31) 152792380

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Substance

Information on ingredients

Chemical name	CAS No.	%	Symbol	R-Phrases
2,3-Butanedione	431-03-8	> 97	F, X.	R11-20-35

Occupational Exposure Limit(s), if available, are listed in section 8.

3. HAZARD IDENTIFICATION

Physical/chemical hazards : Highly flammable.
Environmental hazards : The substance is readily biodegradable.
Human health hazards : Harmful by inhalation; narcosis.

4. FIRST AID MEASURES

Effects and symptoms

Ingestion : Low hazard for usual industrial or commercial handling.

AAA REPORTING
IFF
DEPOSITION
EXHIBIT 10
4/25/06 TL

Gist-brocades

Conform 91/155/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

- Inhalation** : Harmful; possible risk of irreversible effects through inhalation, narcosis.
- Skin contact** : Irritating to skin; reddening.
- Eye contact** : Irritating to eyes; reddening, pain.
- First aid measures**
- General** : Remove contaminated clothing.
- Ingestion** : Wash out mouth with water.
- Inhalation** : Remove victim from area of exposure.
- Skin contact** : Wash off with plenty of water.
- Eye contact** : Wash out with plenty of water.
- Protection of first-aiders** : In case of insufficient ventilation, wear suitable respiratory equipment.

5. FIRE FIGHTING MEASURES

Extinguishing media

- Suitable** : Water, CO₂, foam, dry chemical.
- Not suitable** : Not applicable
- Hazardous thermal (de)composition products** : CO.
- Protection of fire-fighters** : Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Environmental precautions** : If the substance has contaminated surface water, inform the appropriate authorities.
- Methods for cleaning up** : Take up with liquid-absorbent material.
- Other Information** : Wash away remainder with plenty of water.

7. HANDLING AND STORAGE

Gist-brocades

Authorised New Zealand Distributor
Med-Chem Ingredients Limited

Med-Chem Ingredients Limited, 113 Apollo Avenue, 28 Lakes, PO Box 17 400, Porirua
New Zealand. Telephone 02 946 2400, Facsimile 02 946 2400
Out of Auckland call Toll Free 0800 80 98 44

006

Conform 91/156/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

- Handling** : Wear suitable gloves.
In case of insufficient ventilation, wear suitable respiratory equipment.
- Storage** : Keep in a cool, well-ventilated place away from direct sunlight.
- Packaging materials**
- Suitable** : Aluminium or polyethylene containers.
Metal containers with polypropylene inner container.
- Not suitable** : Steel containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering measures** : Ventilate areas.
Local exhaust recommended.
- Hygienic measures** : Change contaminated clothing.
Use appropriate protection.
- Occupational Exposure Limits** : No occupational exposure limits are known.
- Personal protective equipment**
- Respiratory system** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Skin and body** : Working clothing.
- Hands** : Gloves.
- Eyes** : Safety goggles or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid
- Colour** : Greenish - yellow
- Odour** : Characteristic
- Odour threshold** : 0.005 mg/m³
- Molecular weight** : 88.1
- Boiling point** : 86 - 90°C
- Freezing point** : -2 - -4°C

Date of issue

: 20/06/1997

Date of printing

: 20/06/1997

Page 3 of 7

IFF 0352702

Gist-brocades

Authorized New Zealand Distributor
Med-Chem Ingredients Limited

Med-Chem Ingredients Limited, 118 Argyle Avenue, St Lukes PO Box 37 400, Parnell
Auckland, New Zealand. Telephone 09 046 0460. Facsimile 09 046 0090
Out of Auckland call Tel Fax 0800 90 99 99

007

Conform 91/156/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

Decomposition temperature	: 47°C (open cup) ; 137°C (closed cup)
Density	: 0.979 - 0.985 g/cm ³ (25°C)
pH	: 3.2
Solubility in water	: 200 g/l (25°C)
Solubility in other ingredients	: Ethanol: Freely soluble.
Vapour pressure	: 52.2 mbar (20°C) 229 mbar (50°C)
Refractive index	: 1.393 - 1.397 (20°C)
Flash point	: 5°C (closed cup; Pensky Martens)
Autoignition temperature	: 365°C (ASTM D2155 - 631)
Lower explosion limit	: 2.4 volume %
Upper explosion limit	: 13.0 volume %
Oxidation properties	: Not available

10. STABILITY AND REACTIVITY

Stability	: Stable
Conditions to avoid	: Protect from (sun)light.
Materials to avoid	: Oxidizing agents.
Hazardous decomposition products	: Heating to decomposition may produce: CO
Hazardous polymerization	: Will not occur.

11. TOXICOLOGICAL INFORMATION

Chemical name	: 2,3-Butanedione
Acute toxicity	
Oral	: LD ₅₀ rat 3000 - 3400 mg/kg.
Dermal	: LD ₅₀ rabbit > 5000 mg/kg.
Inhalation	: LC ₅₀ rat 2.25 < LC ₅₀ < 5.2 mg/4h.
Skin irritation	: Rabbit 24h: Irritating.
Sensitization	: Guinea pig maximisation test: The substance is not a skin sensitizer.
Chronic toxicity	: NOAEL (oral, rat): 90 mg/kg/d (90 d).

Date of issue

: 20/06/1997

Date of printing

: 20/06/1997

Page 4 of 7

IFF 0352703

Gist-brocades

Authorized New Zealand Distributor
Med-Chem Ingredients Limited

Med-Chem Ingredients Limited, 118 Auckland Avenue, St Lukes, PO Box 37 440, Porirua
Auckland, New Zealand. Telephone 09 945 3458 Facsimile 09 946 8289
Out of hours call toll free 0800 90 99 44

Conform 91/156/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

12. ECOLOGICAL INFORMATION

Chemical name : 2,3-Butanedione
Persistence/degradability : The substance is readily biodegradable.
Ecotoxicity : LC50 (Leuciscus idus): >48 <100 mg/l/96h.

13. DISPOSAL CONSIDERATIONS

Methods of disposal : Disposal according to the local legislation.
Waste of residues : Combustion in an incinerator.
Contaminated packaging : Wash off with plenty of water.
Combustion in an incinerator.

14. TRANSPORT INFORMATION

UN number : 2346

Land - Road/Railway

ADR/RID Class : 3
ADR/RID Item number : 3 b;
Hazard Identification Number : 33

Inland waterways

ADNR Class : 3.2 (II) - 3, 3b)

Sea

IMDG Class : 3.2 (II)
IMDG Page number : 3190

Air

UN/ID Number : 2346
IATA-DGR Class : 3 (II)

National transport regulations

: No additional national transport regulations are known to the supplier.

Date of issue : 20/06/1997

Date of printing : 20/06/1997

Page 5 of 7

IFF 0352704

Gist-brocades

Authorised New Zealand Distributor
Med-Chem Ingredients Limited
Med-Chem Ingredients Limited, 110 Arapaho Avenue, St Lukes, PO Box 37 400, Porirua
Auckland, New Zealand, Telephone 09 846 8468, Facsimile 09 846 8090
Out of Auckland call, Toll Free 0800 00 20 44

009

Conform 91/155/EEC and ISO/DIS 11014

SAFETY DATA SHEET

Diacetyl

15. REGULATORY INFORMATION

EC Regulations

EC Classification
(67/540/EEC-88/379/EEC)

: This product is provisionally labeled by the supplier in accordance to the EC regulations.

Label name

: Butanedione



HIGHLY FLAMMABLE HARMFUL

Hazard symbol(s)

: F, Xn

Risk phrases

- R11: Highly flammable.
- R20: Harmful by inhalation.
- R38: Irritating to skin.

Safety phrases

- S16: Keep away from sources of ignition - No smoking.
- S25: Avoid contact with eyes.
- S51: Use only in well-ventilated areas.

National regulations

: No additional national regulations are known to the supplier.

16. OTHER INFORMATION

This information is based on knowledge available until present.
More detailed information on the physical and chemical properties can be requested from the supplier.
To the best of our knowledge, the information contained herein is accurate and complete.
However nothing herein contained shall be construed to imply any warranty or guarantee.

HISTORY

Date first issue : 03/01/1994
Date previous SDS : 24/01/1996
Date of issue : 20/06/1997
Version : SDS01ZZ03

Date of issue : 20/06/1997 Date of printing : 20/06/1997

30/08/2001 13:27 61-2-9601-2952
TEL: 09.00 FAX 31 152790830

DSM FOOD SPECIALTIES
GE FSU.516

PAGE 08

© C10

Gist-brocades

Conform 91/155/EEC and ISO/DIS 11014

SAFETY DATA SHEET
Diacetyl

SDS prepared by
SDS revised by
Revisions
Authorized by

: F. Looijer

: F. Looijer

: 2

: W. J. V. W. G.

Authorised New Zealand Distributor
Med-Chem Ingredients Limited

Med-Chem Ingredients Limited, 118 Acornth Avenue, St Lukes, PO Box 37 400, Parnell
Auckland, New Zealand. Telephone: 09 846 3468. Facsimile: 09 846 3083
Out of Auckland call Toll Free 0800 36 99 44

Date of issue

: 20/06/1997

Date of printing

: 20/06/1997

Page 7 of 7

IFF 0352706