

MATERIAL SAFETY DATA SHEET.

042557

**BERJE**  
INTERNATIONAL

24 Hours Emergency (CHEMTEC) Tel # (800) 424-9300  
National Poison Control Center (any day/time): (412) 681-6669

5 Lawrence Street  
Bloomfield, NJ  
07003, U.S.A.  
Phone: (201) 748-8980

Telex: 476405  
Fax: (201) 680-9618  
RECEIVED  
FEB 27 1991

IDENTIFICATION.

LABEL NAME : DIACETYL FCC(4-278) .  
OTHER NAME : DIACETYL  
CHEMICAL NAME: 2,3-BUTANEDIONE

FEMA NUMBER: 2370  
CAS NUMBER: 431-03-0

EP/OHS

PHYSICAL DATA.

ODOR AND APPEARANCE : Intensely yellow or yellow-green mobile liquid having a powerful diffusive pungent buttery odor; vapor has chlorine-like odor.  
SPECIFIC GRAVITY: Data Not Found. BOILING POINT: 87.5 MELTING POINT: -3 C  
VAPOR PRESSURE: Data Not Found VAPOR DENSITY (Air=1): 3.0 SOLUBILITY IN WATER: Soluble

FIRE, EXPLOSION AND REACTIVITY.

FLASH POINT: 48 F DOT CLASSIFICATION: Flammable STABILITY: Stable NFPA CLASSIFICATION: NF

003267

EXTINGUISHING MEDIA:

[X] WATER FOG, [X] FOAM, [X] DRY CHEMICAL, [X] CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURE / UNUSUAL FIRE AND EXPLOSION HAZARDS.

Firefighter wearing positive pressure self-contained breathing apparatus, spray ext. media directly into base of flames. Water is unsuitable for use on burning material but may be used to cool container. Due to low electrical conductivity can generate electrostatic charges due to offlow agitation.

HAZARDOUS COMBUSTION / DECOMPOSITION PRODUCT:

When heated to decomposition, produces acrid smoke and fumes.

HAZARDOUS POLYMERIZATION PRODUCT: HAZARDOUS POLYMERIZATION WILL NOT OCCUR

CAUTIONS AND MATERIALS TO AVOID: Avoid sparks, flame and heat. Avoid contact with strong oxidizers & avoid hot work and sources of ignition on or near empty containers.

PROTECTION INFORMATION.

RESPIRATORY PROTECTION: Use positive pressure self-contained breathing apparatus.

EYE PROTECTION : Use chemical splash goggles or positive pressure self-contained breathing apparatus.

SKIN PROTECTION: Use of rubber gloves recommended.

OTHERS: Use protective clothing as necessary.

OCCUPATIONAL EXPOSURE LIMITS.

THRESHOLD LIMIT VALUE [TLV]: Data Not Established OSHA PERMISSIBLE EXPOSURE LIMIT [PEL]: Data Not Established  
HAS THE SUBSTANCE BEEN LISTED AS A CARCINOGEN ? NO

HEALTH HAZARD INFORMATION.

HEALTH HAZARD DETERMINATION liquid and vapor are IRRITATING to skin, eyes, throat & lungs.

Essential Oils, Aroma Chemicals, Perfume and Flavor Raw Materials, Fragrances

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**EMERGENCY AND FIRST AID PROCEDURES.**

**INHALATION:** Remove to fresh air, and call a physician.

**EYE CONTACT:** Remove contact lenses. Flush eyes with cool water for at least 15 minutes. If irritation persists then call a physician.

**SKIN CONTACT:** Remove contaminated clothing. Wash with mild soap & water. Consult physician if necessary.

**INGESTION:** Rinse mouth. DO NOT INDUCE VOMITING. Administer milk or water. Consult a physician.

**SPILLS, LEAKS AND DISPOSAL PROCEDURES.**

**IF MATERIAL SPILLED OR RELEASED:** Remove all potential sources of ignition. Contain spill with inert non-combustible absorbent material, and place in approved containers.

**WASTE DISPOSAL METHODS:** Dispose of in accordance with state, local and federal regulations.

**HANDLING AND SHIPPING PROCEDURES.**

Store in full containers, away from light and heat sources.

**SARA 313.**

This product contains the following chemicals subject to the reporting requirements of SARA 313.(Note: this SARA declaration must not be detached from this MSDS and that any copying and/or redistribution of this MSDS must include this declaration.)

NONE

The information contained in this material safety data sheet was obtained from current and reliable sources. This data is supplied without warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense resulting from improper use of this product.

Date Revised :10/12/87

Printing Date: 02/19/91

Essential Oils, Aroma Chemicals, Perfume and Flavor Raw Materials, Fragrances

CONFIDENTIAL - SUBJECT TO PROTECTIVE ORDER SB-IFF 001776

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DIACETYL FCC

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6- HEALTH HAZARD INFORMATION

Health Hazard Determination : May be irritating to the skin and eyes.

Liquid and vapor is irritating to the skin and eyes.

Vapor is irritating to throat and lungs.

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7- EMERGENCY AND FIRST AID PROCEDURES

Inhalation Exposure : Provide Fresh Air . If breathing is difficult, supplemental oxygen may be given from a demand-type or continuous-flow inhaler, preferably with a physician's advice.

Eye Contact : Wash or irrigate with water at least 15 minutes. Obtain medical advice.

Skin Contact : Wash with soap and water. If irritation persists, obtain medical advice.

Ingestion : (Never give anything by mouth to an unconscious person).

Rinse mouth with water ; Ingest milk ; Obtain medical advice.

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8- SPILL, LEAK AND DISPOSAL PROCEDURES

Precautions for spill or release:

Remove sources of ignition. Absorb on absorbant material. Dispose in approved manner.

WASTE DISPOSAL :

Incinerate or remove to landfill following all local, state and federal regulations.

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9- HANDLING AND STORAGE

Keep away from heat and flame. Provide adequate ventilation. Keep container tightly closed when not in use.

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CHEMICAL AND COMMON NAMES :

DIACETYL SYNTHETIC

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180.000

**MATERIAL SAFETY DATA SHEET**

Manufacturer: Citrus and Allied Essences, Ltd.  
65 South Tyson Avenue Floral Park, NY 11001

Emergency Telephone Number: 9 - 5 EST (718)343-0030  
All Other Times (800)424-9300

SECTION I IDENTIFICATION AND GENERAL INFORMATION

Product Name: DIACETYL 99/100% FCC

Chemical Name: Diacetyl

Synonyms: Biacetyl; 2,3-Butanedione; 2,3-Diketobutane; Dimethyl diketane; Dimethylglyoxal; Butadione;

Product No.: A123701 Fema No.: 2370 CAS No.: 431-03-8

Molecular Formula: C<sub>4</sub>H<sub>6</sub>O<sub>2</sub> Molecular Weight: 86.1

SECTION II HAZARDOUS INGREDIENT(S)

Hazardous Ingredients: Diacetyl

SECTION III PHYSICAL DATA

Boiling Point (Deg. C): 88 C Melting Point (Deg.): -3 C

Vapor Density: 3.0 Vapor Pressure: NA

Specific Gravity: .979-.985 Solubility in Water:  
(@ 25 Deg. C) Soluble

Appearance and Odor: Intensely yellow or yellow-green mobile liquid with a very powerful and diffusive pungent buttery odor. The vapors have a chlorine -like odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): 48 F

Extinguishing Media: CO<sub>2</sub>; Foam; Dry Chemical

Special Fire Fighting Procedure: Wear protective clothing to prevent contact with skin and eyes

Unusual Fire And Explosion Hazards: Flammable; vapor is heavier than air and may travel along the ground; distant

ignition possible. Dangerous when exposed to heat or flame.

SECTION V REACTIVITY DATA

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide

Materials/Conditions to Avoid: strong oxidizers

Stability: Stable

SECTION VI HEALTH HAZARD DATA

Threshold Limit Value (ACGIH): None Established

Threshold Limit Value (OSHA PEL): None Established

CARCINOGENICITY

NTP Monograph: None Established

IARC Monograph: None Established

ACUTE TOXICITY DATA

Oral LD50: 1580 mg/kg (rat)

Dermal LD50: None Established

Inhalation LC50: None Established

HEALTH HAZARDS (ACUTE AND CHRONIC)

Ingestion: Sore throat; abdominal pain; may be absorbed

Inhalation: Harmful; Sore throat, coughing

Skin Contact: Liquid May be Irritating

Eye Contact: Liquid May be Irritating

Note:

Other Effects: Vapor is irritating to throat and lungs.

SECTION VII EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush immediately with cold clean water for at least 15 minutes, contact physician immediately.

Skin Contact: Thoroughly wash the affected area with soap and water. Flush with large quantities of water. If irritation persists, call a physician.

Inhalation: Remove individual to fresh air, contact physician if necessary

Ingestion: Administer water or milk to dilute. Contact a physician or local poison control center immediately.

#### SECTION VIII PERSONAL PROTECTION

Eyes: The use of Goggles or a face shield is recommended.

Respiratory: Respiratory protection is normally not required in well ventilated areas. However, NIOSH approved respiratory protection may be required when the material is rated toxic by inhalation or if the material is to be used in a confined area.

Other Protective Equipment: Chemical resistant gloves are recommended.

Ventilation: Ventilation meeting ACGIH Standards should be employed.

Work/Hygienic Practices: Use good personal hygiene practices; Limit exposure to product whenever possible. Wash any contaminated clothing or shoes before each use.

#### SECTION IX SPILL, LEAK, AND WASTE DISPOSAL PROCEDURE

Remove any source of flame or sparks. If in a confined area, NIOSH approved respiratory protection may be required. Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container. Dispose of in accordance with current laws and regulations.

#### SECTION X STORAGE AND HANDLING

Store in tight full containers in a cool dry place away from light.

#### SECTION XI CONCLUSION

The information contained herein is based on data considered accurate and reliable. However, the data is provided with out

any warranty, expressed or implied regarding its correctness or accuracy. It is the users responsibility both to determine safe conditions for use of this product, and to assume liability for loss, injury, damage, or expense resulting from the improper use of this product.

Material Safety Data Sheet Prepared By: Citrus and Allied  
Essences, Ltd. on (718)343-0030