

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

943871

FRUCTALATE® © Firmenich product

CAS No: 72903-27-6 EC No: 417-310-0

REACH No: 01-0000016412-79 INDEX No: 607-671-00-4

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

Fragrance ingredient for use in consumer products.

Not for personal use in this form or concentration.

Intended to be used in the manufacture of products for consumers

1.3 Details of the supplier of the safety data sheet

John Carey

Firmenich Inc. 250 Plainsboro Road Princeton - New Jersey 08536 - USA john.carey@firmenich.com Tel.:+1.609.452.1000

1.4 Emergency telephone number

FOR INFORMATION OR IN AN EMERGENCY CALL NCEC @ +1 215 207 0061.

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to Regulation HCS 2012

Not Classified according to the rules of the HCS 2012.

Additional information

Full text of listed statements: See section 16

2.2 Label elements

Revised on: 10 May 2020 / v 9.2 18176618 Date of printing: 11-OCT-2020 Reference: US

Product: 943871 - FRUCTALATE®

Page 1 / 9



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

2.3 Other hazards

No data available at this time.

3 COMPOSITION/INFORMATION ON INGREDIENTS

The exact percentage (concentration) of composition has been withheld as a trade secret.

3.1 Substance

Chemical substance.

4 FIRST-AID MEASURES

4.1 Description of first aid measures

General information:

As in all cases of potential poisoning, Obtain medical advice immediately.

In case of eye contact:

In the event of contact with the eyes, irrigate with water for at least 15 minutes; obtain medical advice if irritation persists.

In case of inhalation:

In the event of exposure to vapors, immediately remove from the area to a fresh air environment.

In case of skin contact:

Remove contaminated clothes. Wash skin with large volumes of water.

If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.

In case of ingestion:

In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water.

Obtain medical advise immediately.

Do not induce vomiting, obtain medical advise immediately.

4.2 Most important symptoms and effects, both acute and delayed

No specific data available.

4.3 Indication of immediate medical attention and special treatment needed

No specific data available.

5 FIRE-FIGHTING MEASURES

Reference: US

Page 2 / 9



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

5.1 Extinguishing media

In the event of fire, adequate extinguishers should be used. Avoid inhalation of smoke and fumes. In case of insufficient ventilation, wear suitable respiratory equipment.

Use standard procedures and preferred extinguishing media as stated below.

Extinguishing media: Foam, carbon dioxide or dry chemical.

5.2 Special hazard arising from the substance or mixture

None.

5.3 Advice for fire-fighters

No specific advice.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Impervious gloves should be worn when handling spillages. No smoking. Avoid naked flames or other potential sources of ignition (eg. electrical equipment).

Avoid skin contamination and inhalation of vapour.

Individual washing routines should be followed after any potential contact.

Ensure adequate ventilation in working areas following accidental releases.

For emergency personnel:

Apply the same recommendations as section 6.1

6.2 Environmental precautions

Do not discharge directly into drains, air, into soil or into the aquatic environment.

6.3 Methods and material for containment and cleaning up

For containment:

Small spills can be wiped up with a cloth or paper. Standard absorbents can be used (saw dust, sand, vermiculite). Wear rubber gloves. Avoid contact with skin. If skin contact occurs, wash liberally with soap and water.

For cleaning-up:

Spillages should be disposed of in accordance with Governmental Regulations.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes.

18176618

Wear impervious gloves protection and eye/face protection.

No smoking. Avoid any sources of ignition.

Avoid exposing to high temperature during processing.

Do not ingest or apply to the skin as such. Good personal washing routines should be followed.

Maintain adequate local and general ventilation where product is handled.

Protective measures

Reference: US

Revised on: 10 May 2020 / v 9.2 Date of printing: 11-OCT-2020 Product: 943871 - FRUCTALATE®

3 / 9 Page



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

Keep strict control of dust accumulation to a minimum. Maintain adequate local and general ventilation where product is handled. Avoid any sources of ignition.

Advice on general occupational hygiene

Good personal washing routines should be followed.

7.2 Conditions for safe storage, including any incompatibilities

It is good general practice to store in closed, preferably full, containers away from heat sources, and protected from extremes of temperature. Do not re-use the empty container.

Respect generals rules for compatibility storage.

7.3 Specific end use(s)

Not available at this time.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values

Derived No Effect Level (DNEL)

Hazard conclusion Worker (dermal), No hazard identified.

Hazard conclusion Worker (inhalation), No hazard identified.

Hazard conclusion Consumer (oral), No hazard identified.

Hazard conclusion Consumer (inhalation), No hazard identified.

Hazard conclusion Consumer (dermal), No hazard identified.

Predicted No Effect Concentration (PNEC)

PNEC Aqua (freshwater) = $2.7 \mu g/l$

PNEC Aqua (marine water) = $0.27 \mu g/I$

PNEC Water (intermittent release) No hazard identified.

PNEC Sediment (freshwater) = 21 mg/kg sediment dw

PNEC Sediment (marine water) = 4.2 mg/kg sediment dw

PNEC STP = 10 mg/l

PNEC Soil = 5.44 mg/kg soil dw

PNEC Air No hazard identified.

PNEC Oral (secondary poisoning) No hazard identified.

8.2 Exposure controls

Avoid exposing to high temperature during processing.

Maintain adequate local and general ventilation where product is handled.

Appropriate engineering controls

Maintain adequate local and general ventilation where product is handled and dispensed.

Environmental exposure controls

Not available at this time. Minimize release to the environment.

Personal protection

Reference: US

Revised on : 10 May 2020 / v 9.2

18176618

Date of printing : 11-OCT-2020

Product : 943871 - FRUCTALATE®

Page 4 / 9



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

Respiratory protection: None required; avoid breathing vapors.

Hand protection: Adequate and Impervious Protective Gloves should be worn.

Eye protection: Adequate safety glasses should be used.

Skin protection: Wear protective clothing, overall if necessary to limit the odour contamination of personal

clothing. Individual washing routines should be followed after any potential contact.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

LIQUID COULD CRYSTALLIZE Appearance:

Colour: COLOURLESS

Odour: Characteristic strong odour according to the

commercial description of the substance.

pH: Not available

= -11.15 °C (Method A1) Melting point/range (°C):

Initial boiling point/range (°C): = 277.85 °C at 100.6 - 103.6 (Method A2) Flash point (closed cup): > 212 Fahrenheit (> 100 Centigrade)

Evaporation rate: Not available Flammability (solid/gas): Not applicable

Explosive properties (St class): N/A Vapor pressure (At 20°C in mm Hg): $< 0.1 \, \text{mm}$ Vapour density: Not available

Relative density (d 20/20): = 1.05 at 20°C (Method A3) = 1280 mg/l at 20°C (Method A6) Water solubility (20°C): Partition coef. (n-octanol/water): Log Kow = 3.04 - 3.19 (Method A8)

= 384 °C at 98.94 - 99.43kPa (Method A15) Auto-ignition temperature (°C):

Not available Decomposition temperature: Viscosity: Not available Explosive properties:

Not available Oxidizing properties: Not available

9.2 Other safety information

None

10 STABILITY AND REACTIVITY

10.1 Reactivity

No reaction known with water.

10.2 Chemical stability

Presents no significant reactivity hazard. Normally stable even at elevated temperatures and pressures. Avoid temperatures above or near to the flash point. Not pyrophoric nor reactive with water. Does not undergo explosive decomposition, is shock stable, and is not an oxygen donor. Does not form explosive mixtures with other organic materials. Will not undergo hazardous exothermic polymerization.

Page

10.3 Possibility of hazardous reactions

Not known.

Revised on: 10 May 2020 / v 9.2 18176618 Reference: US Date of printing: 11-OCT-2020 Product: 943871 - FRUCTALATE®

5 / 9



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

10.4 Conditions to avoid

Avoid temperatures above or at least 5 °C below flash point for any flammable liquids.

Do not heat closed containers.

Avoid contact with oxidizing agents.

10.5 Incompatible materials

Avoid strong oxidizing agents.

10.6 Hazardous decomposition products

Contact with water or storage under recommended conditions for one year should not produce dangerous decomposition products.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) acute toxicity

Acute oral toxicity (Rat, OECD 420, Gavage): LD50 > 2000 mg/kg

Acute dermal toxicity (Rat, OECD 402, Semi-occlusive): LD50 > 2000 mg/kg

(b) skin corrosion/irritation

Primary Skin irritation (OECD 404 modified) (Rabbit, Semi-occlusive): Non irritant

(c) serious eye damage/irritation

Acute Eye irritation (Rabbit): Non irritant

(d) respiratory or skin sensitisation

Guinea pig Maximisation test (OECD 406): Non-sensitising to skin

(e) germ cell mutagenicity

Bacterial Reverse Mutation test (Ames) (Salmonella, OECD 471, With and without S9, 5 strains):

Non mutagenic

In vitro mammalian cell gene mutation test (Chinese hamster, CHO-K1cells, OECD 476, With and

without S9): Non mutagenic

In vitro Mammalian Chromosome Aberration Test (Human, OECD 473): No chromosomal aberration

(f) carcinogenicity

No data available

(g) reproductive toxicity

No data available

(h) STOT-single exposure

No data available

Reference: US

(i) STOT-repeated exposure

18176618

Revised on: 10 May 2020 / v 9.2 Date of printing: 11-OCT-2020 Product: 943871 - FRUCTALATE®

6 / 9 Page



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

Repeated Dose 28-Day Oral Toxicity Study in Rodents (Rat, OECD 407, Gavage): NOEL = 1000 mg/kg/day

(j) aspiration hazard No data available

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Alga, Growth Inhibition Test (Scenedesmus subspicatus, OECD 201, Static):

72 ErC50 = 86 mg/l (Based on nominal concentration)

72 NOEC = 25 mg/l (Based on nominal concentration)

Daphnia sp. Acute Immobilisation Test and Reproduction Test (OECD 202, Static): 48 EC50 = 45 mg/I (Based on nominal concentration)

Fish, Acute Toxicity Test (Rainbow trout (Oncorhynchus Mykiss), OECD 203, Semi-static): 96 LC50

= 7.1 mg/l (Based on nominal concentration)

Activated Sludge, Respiration Inhibition Test (OECD 209, Static):

3 EC50 = 840 mg/l

3 NOEC = 320 mg/l

12.2 Persistence and degradability

Ready Biodegradation - CO2 in Sealed Vessels (Headspace) (OECD 310, Sludge): Readily biodegradable (69.39% in 28 day(s))

Hydrolysis as a Function of pH (OECD 111): Estimated Half-life at pH7 > 1 year Stable but unstable in basic conditions

12.3 Bioaccumulative potential

Log Kow = 3.04 - 3.19 (Method A8)

12.4 Mobility in soil

Adsorption coefficient: Log Koc = 2.1 - 2.6

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

No data available

Reference: US

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

18176618

Product: The product should be handled according to the instructions given under sections 6, 7 and 8. Dispose of according to local or national regulations. The product should not be allowed to enter drains or the environment.

Contaminated packaging: Empty packaging should be disposed according to local or national regulations by an approved waste handling

> Revised on: 10 May 2020 / v 9.2 Date of printing: 11-OCT-2020 Product: 943871 - FRUCTALATE®

7 / 9 Page



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

14 TRANSPORT INFORMATION

In case of accidental spillage or fire during transport, refer to instructions given under points 5, 6, 7 and 8 above.

UNO

UN-No: Not regulated

Proper Shipping Name: N/A Class: Packing Group:

Land transport (ADR/RID)

UN-No: Not regulated

Proper Shipping Name: N/A Class: Packing group:

Sea transport (IMDG-Code)

UN-No: Not regulated

Proper Shipping Name: N/A Class: Packing group:

Air transport (ICAO-IATA)

UN-No: Not regulated

Proper Shipping Name: N/A Class: Packing group:

15 REGULATORY INFORMATION

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

This chemical is NOT subject to reporting requirements of Section 313 of Title III of the Superfund Amendements and Reauthorization Act of 1986 and 29 CFR Part 1910.1200.

15.2 Chemical Safety Assessment

No data available at this time.

18176618

16 OTHER INFORMATION

Revisions

Reference: US

Jun-2020: Version 9.2 - Updates to sections 1, 2, 3, 8, 9, 11, 12, 14, 15, 16

Date of printing: 11-OCT-2020 Product: 943871 - FRUCTALATE®

Page 8 / 9 Revised on: 10 May 2020 / v 9.2



This Safety Data Sheet cancels and replaces all preceding SDS for this product.

Key literature references
RIFM database
OECD SIDS
EU IUCLID
Supplier information

Full text of phrases used under section 2

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We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Firmenich, it is the user's obligation to determine conditions of safe use of the product.

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Revised on: 10 May 2020 / v 9.2 Date of printing: 11-OCT-2020

Product: 943871 - FRUCTALATE®

Reference: US 18176618 Date of printing: 11-OCT

9 / 9

Page