# SAFETY DATA SHEET

**Revision date:** 15-Feb-2024

**Revision Number** 2

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product identifier**

**Product Name** MANGO FLAVOUR NAT E49284 (FAMAN49284)

**Product Code(s)** 000000026557

**Other means of identification**

**Proper shipping name** EXTRACTS, FLAVOURING, LIQUID

**UN number or ID number** 1197

**Recommended use of the chemical and restrictions on use**

**Recommended use** Flavour.

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Supplier**
Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 309 2528
Facsimile: +64 9 0508 366 364

**For further information, please contact**

**Contact Point** Product Safety Department

**Emergency telephone number**

**Emergency Telephone** **0 800 734 607 (ALL HOURS)**

## 2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

**GHS Classification**

**SIGNAL WORD**
Danger

**EPA New Zealand HSNO approval code or group standard** Food Additives and Fragrance Materials (Flammable) Group Standard 2020
Approval Number: HSR002576

| | |
|---|---|
| **Flammable liquids** | Category 2 (HSNO - 3.1B) |
| **Serious eye damage/eye irritation** | Category 2 (HSNO - 6.4A) |
| **Acute aquatic toxicity** | Category 3 (HSNO - 9.1D) |
| **Chronic aquatic toxicity** | Category 3 (HSNO - 9.1C) |

**Label elements**


**Hazard statements**
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
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
Wash face, hands and any exposed skin thoroughly after handling
Avoid release to the environment
**Precautionary Statements - Response**

IF IN EYES: 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
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use CO2, dry chemical, or foam for extinction
Collect spillage
**Precautionary Statements - Storage**
Store in a well-ventilated place. Keep cool
**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification**
No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Ethyl alcohol (Ethanol) | 64-17-5 | >60 |
| Non-hazardous ingredients | Proprietary | Balance |

## 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. If symptoms persist, call a physician.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention if symptoms occur.

**Self-protection of the first aider** Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapors or mists.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause redness and tearing of the eyes. Burning sensation. Dizziness.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**

**Suitable Extinguishing Media** Foam. Carbon dioxide (CO2). Dry chemical.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Highly flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. In the event of fire, cool tanks with water spray. Runoff may create fire or explosion hazard. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Hazardous combustion products** Carbon oxides.

**Special protective actions for fire-fighters**

| | |
|---|---|
| **Special protective equipment for fire-fighters** | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
| **Hazchem code** | 3YE |

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

| | |
|---|---|
| **Personal precautions** | Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors or mists. See section 8 for more information. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. |
| **Other information** | Ventilate the area. Refer to protective measures listed in Sections 7 and 8. |
| **For emergency responders** | Shut off ignition sources. Clear area of all unprotected personnel. Use personal protection recommended in Section 8. |

**Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. |

**Methods and material for containment and cleaning up**

| | |
|---|---|
| **Methods for containment** | Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. |
| **Methods for cleaning up** | Take precautionary measures against static discharges. Dam up. Use non-sparking tools. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. |

**Precautions to prevent secondary hazards**

| | |
|---|---|
| **Prevention of secondary hazards** | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Do not enter storage areas or confined spaces unless adequately ventilated. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. |
| **General hygiene considerations** | Avoid contact with skin, eyes, and clothing. Wear suitable gloves and eye/face protection. |

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Protect from direct sunlight. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep container closed when not in use.

**Incompatible materials** Oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits** No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):

Ethyl alcohol (Ethanol): WES-TWA 1,000 ppm, 1,880 mg/m$^3$, (oto)

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

(oto) - Toxic to the ear

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, RESPIRATOR.

| | |
|---|---|
| **Eye/face protection** | Goggles. |
| **Hand protection** | Impervious gloves. |
| **Skin and body protection** | Wear suitable protective clothing. Antistatic boots. Overalls. |
| **Respiratory protection** | If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. |
| **Environmental exposure controls** | No information available. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | No information available |
| **Color** | Pale Yellow |
| **Odor** | Characteristic Mango |
| **Odor threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | No data available | None known |
| **Melting point / freezing point** | No data available | None known |
| **Boiling point / boiling range** | No data available | None known |
| **Flash point** | 16 °C | CC (closed cup) |
| **Evaporation rate** | No data available | None known |
| **Flammability (solid, gas)** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability or explosive limits** | No data available | |
| **Lower flammability or explosive limits** | No data available | |
| **Vapor pressure** | No data available | None known |
| **Vapor density** | No data available | None known |
| **Relative density** | 0.7972 - 0.8372 | @ 20 °C |
| **Water solubility** | No data available | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Hyphen** | No data available | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |

**Other information**

## 10. STABILITY AND REACTIVITY

**Reactivity**

**Reactivity** No information available.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.

**Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks. Static discharge (electrostatic discharge). Direct sunlight.

**Incompatible materials**

**Incompatible materials** Oxidizing agents.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** May cause irritation of respiratory tract. Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.

**Eye contact** Causes serious eye irritation. May cause redness, itching, and pain.

**Skin contact** May cause irritation.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

**Symptoms** May cause redness and tearing of the eyes. Irritating. Dizziness.

**Acute toxicity**

**Numerical measures of toxicity**
No information available

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ethyl alcohol (Ethanol) | = 7060 mg/kg ( Rat ) | - | = 124.7 mg/L ( Rat ) 4h |

*See section 16 for terms and abbreviations*

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** Causes serious eye irritation. Classification based on data available for ingredients.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Chronic effects:** For Ethanol: Repeated or prolonged exposure to this material could result in effects on the liver, kidneys, gastrointestinal tract, and heart muscle. Ethanol may cause adverse reproductive effects. Ingestion by pregnant women may cause serious effects in their newborn babies called 'foetal alcohol syndrome'. A study of the effects of ethanol inhalation in humans found that at between 5000-10000 ppm subjects experienced coughing and smarting of the eyes and nose, with symptoms disappearing within minutes. People exposed at 15000 ppm experienced continuous lacrimation and coughing. Irritation of the eyes and respiratory tract were not noted at concentrations below 5000 ppm.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity** Avoid contaminating waterways. Harmful to aquatic life with long lasting effects.

**Terrestrial ecotoxicity** There is no data for this product.

| Chemical name | EarthWorm | Avian | Honeybees |
|---|---|---|---|
| Ethyl alcohol (Ethanol) | LC50 0.1 - 1 mg/cm2 (Eisenia foetida 48 h filter paper) | - | - |

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Ethyl alcohol (Ethanol) | - | LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss)<br>LC50: >100mg/L (96h, Pimephales promelas)<br>LC50: 13400 - 15100mg/L (96h, Pimephales promelas) | LC50: 9268 - 14221mg/L (48h, Daphnia magna)<br>EC50: =2mg/L (48h, Daphnia magna) |

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility**

**Mobility in soil** No information available.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Ethyl alcohol (Ethanol) | -0.35 |

**Other adverse effects**

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from residues/unused products** Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 2, 3 and 4 chemicals - may not be disposed of into or onto a landfill or sewage facility. They may only be burnt in certain situations. Class 2.1.1, 3.1 and 4.1.1 chemicals may only be discharged into the environment as waste if the substance will not at any time come into contact with class 1 or class 5 substances; and there will be no ignition source in the vicinity of the disposal site at any time and if the substance were to ignite, no person, or place where a person may legally be, would be exposed to an unsafe level of heat radiation.

**Contaminated packaging** For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

## 14. TRANSPORT INFORMATION

**ROAD AND RAIL TRANSPORT** Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on

Land; DANGEROUS GOODS.

| | |
|---|---|
| **UN number or ID number** | 1197 |
| **Proper shipping name** | EXTRACTS, FLAVOURING, LIQUID |
| **Transport hazard class(es)** | 3 |
| **Packing group** | II |
| **Hazchem code** | 3YE |

**IATA** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

| | |
|---|---|
| **UN number** | 1197 |
| **UN proper shipping name** | EXTRACTS, FLAVOURING, LIQUID |
| **Transport hazard class(es)** | 3 |
| **Packing group** | II |

**IMDG** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

| | |
|---|---|
| **UN number** | 1197 |
| **UN proper shipping name** | EXTRACTS, FLAVOURING, LIQUID |
| **Transport hazard class(es)** | 3 |
| **Packing group** | II |
| **IMDG EMS Fire** | F-E |
| **IMDG EMS Spill** | S-D |

## 15. REGULATORY INFORMATION

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

**New Zealand**

**National regulations** See section 8 for national exposure control parameters

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**EPA New Zealand HSNO approval code or group standard** Food Additives and Fragrance Materials (Flammable) Group Standard 2020
Approval Number: HSR002576

| Chemical name | New Zealand HSNO Chemical Classification |
|---|---|
| Ethyl alcohol (Ethanol) - 64-17-5 | 3.1B,6.4A<br>3.1C,6.4A |

**International Inventories**

| | |
|---|---|
| **NZIoC** | All the constituents of this material are listed on the New Zealand Inventory of Chemicals or are regulated through the Food Standards Australia New Zealand (FSANZ). |
| **TSCA** | Contact supplier for inventory compliance status. |
| **DSL/NDSL** | Contact supplier for inventory compliance status. |
| **EINECS/ELINCS** | Contact supplier for inventory compliance status. |
| **ENCS** | Contact supplier for inventory compliance status. |
| **IECSC** | Contact supplier for inventory compliance status. |
| **KECL** | Contact supplier for inventory compliance status. |
| **PICCS** | Contact supplier for inventory compliance status. |
| **AIIC** | All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals or are regulated through the Food Standards Australia New Zealand (FSANZ). |

**Legend:**
**NZIoC - New Zealand Inventory of Chemicals**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AIIC- Australian Inventory of Industrial Chemicals**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

| | |
|---|---|
| **Prepared By** | This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services). |
| **Issuing Date:** | 15-Feb-2024 |
| **Reason(s) For Issue:** | Revised Primary SDS<br>Change in Hazardous Chemical Classification<br>Change in Personal Protective Equipment (PPE) |

**Revision Note:**
The symbol (*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

| Legend | Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

**Key literature references and sources for data used to compile the SDS**
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.**

**Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.**

**End of Safety Data Sheet**