LORANN OILS, INC.

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0252 – Bourbon Type Flavor, Natural/Artificial

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/12/2016 Version: 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : 0252 - Bourbon Type Flavor, Natural/Artificial

Product form : Mixture

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

Use of the substance/mixture : Food industry: component

1.3. Details of the supplier of the safety data sheet

LorAnn Oils, Inc.
4518 Aurelius Road
Lansing, MI 48910
Telephone: 1.800.862.8620

1.4. Emergency telephone number

Emergency number : CHEMTREC: Within USA and Canada: 1.800.424.9300 Outside USA and Canada: +1 703 527 3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq.3 H226

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : Highly flammable liquid and vapor

Precautionary statements (GHS-US) : Keep away from heat source and sparks . No smoking near container.
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof manufacturing equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear eye protection and protective gloves.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use ABC-powder to extinguish
Store in a well-ventilated place. Keep cool
Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	%	Classification (GHS-US)
Proprietary Flavor Ingredient- P106	8.8-10.6	Acute Tox. 4 (oral), H302 Acute Tox. 4 (Inhalation: dust, mist), H332 Aquatic Acute 2, H401

*The specific chemical identities of the ingredients in this mixture, as well as, exact concentrations of any hazardous ingredients stated above, are considered trade secrets. This information is withheld in accordance with the provisions of 1910.1200 of the Code of Federal Regulations.

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : If swallowed, rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor.

Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof manufacturing equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Proprietary Flavor Ingredient – P106	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear eye protection and protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Brown

Odor : Bourbon

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : > 100 °F

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Flash point	:	101 101 °F
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Specific gravity / density	:	1.015
Solubility	:	Miscible with water. Water: N/A
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Proprietary Flavor Ingredient – P314	
LD50 oral rat	>10000 mg/kg (Rat)

Proprietary Flavor Ingredient - P169	
LD50 oral rat	13000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
ATE US (oral)	13000.000 mg/kg body weight

Proprietary Flavor Ingredient - p322	
LD50 oral rat	20000 mg/kg (Rat; Experimental value)
LD50 dermal rat	22500 mg/kg (Rat; Experimental value)

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Proprietary Flavor Ingredient - p322	
LD50 dermal rabbit	20800 mg/kg (Rabbit; Experimental value)
ATE US (oral)	20000.000 mg/kg body weight
ATE US (dermal)	20800.000 mg/kg body weight
LD50 oral rat	5900 mg/kg (Rat)

Proprietary Flavor Ingredient – P106	
LD50 oral rat	1620 mg/kg body weight (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Experimental value)
ATE US (oral)	1620.000 mg/kg body weight
ATE US (dust, mist)	1,500 mg/1/4h

Proprietary Flavor Ingredient – p324	
LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experiemental value)
LD50 dermal rabbit	>16000 mg/kg (Rabbit; Literature study)
ATE US (oral)	10740.000 mg/kg body weight

Proprietary Flavor Ingredient - P239	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; >5000 mg/kg bodyweight; Rat)
LD50 dermal rabbit	3216 mg/kg (Rabbit; Experimental value; 3216 mg/kg bodyweight; Rabbit)
ATE US (dermal)	3216.000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Proprietary Flavor Ingredient - P169	
LC50 fish 1	65 (53-78) mg/l (48 h; Leuciscus idus)
EC50 Daphnia 1	755 mg/l (Daphnia magna)
LC50 fish 2	17 mg/l (Leuciscus idus)
Threshold limit other aquatic organisms 1	236 mg/l (72 h; Protozoa; Toxicity test)
Threshold limit other aquatic organisms 2	140 mg.l (16 h; Pseudomonas putida; Toxicity test)
Threshold limit algae 1	700 mg/l (192 h; Microcystis aeruginosa; Toxicity test)
Threshold limit algae 2	47 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)

Proprietary Flavor Ingredient - p322	
LC50 fish 1	51400 mg/l (96 h; Pimephales promelas)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)

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Proprietary Flavor Ingredient - p322	
EC50 Daphnia 1	34400 mg/l (48 h; Daphnia magna)
LC50 fish 2	51600 mg/l (96 h; Oncorhynchus mykiss)
TLM fish 1	> 1000 ppm (96 h; Pisces)
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	15000 mg/l (336 h; Selenastrum capricornutum)
Threshold limit algae 2	< 5300 mg/l (336 h; Skeletonema costatum)
Proprietary Flavor Ingredient – P106	
LC50 fish 1	460 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1	400 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	10 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	230 mg/l (48h; Daphnia magna)
Threshold limit other aquatic organisms 1	<658 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	640 ppm (96 h; Scenedesmus quadricauda)
Threshold limit algae 2	2600 mg/l (72h; Algae)

Proprietary Flavor Ingredient - p324	
LC50 fish 1	14200 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1	65 mg/l (72 h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)

Proprietary Flavor Ingredient - P239	
LC50 fish 1	700 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	255 mg/l (48 h; Daphnia magna)
LC50 fish 2	700 mg/l (48 h; Lepomis gibbosus)
EC50 Daphnia 2	320 mg/l (24 h; Daphnia magna)
Threshold limit algae 1	105 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	> 500 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

12.2. Persistence and degradability

0252 - Bourbon Type Flavor, Natural/Artificial	
Persistence and degradability	Not established.
Proprietary Flavor Ingredient – P314	
Persistence and degradability	Biodegradability in water: no data available
Proprietary Flavor Ingredient - P169	
Persistence and degradability	Biodegradability in water: no data available. Biodegradability in soil: no data available. Highly mobile in soil.
ThOD	2.479 g O_2/g substance

Proprietary Flavor Ingredient - p322	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.96 - 1.08 g O_2/g substance
Chemical oxygen demand (COD)	1.63 g O_2/g substance
ThOD	1.69 g O_2/g substance
BOD (% of ThOD)	0.57 % ThOD

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Proprietary Flavor Ingredient – P106	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.06 g O_2/g substance
Chemical oxygen demand (COD)	2.4 g O_2/g substance
ThOD	2.5 g O_2/g substance

Proprietary Flavor Ingredient - p324	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O_2/g substance
Chemical oxygen demand (COD)	1.70 g O_2/g substance
ThOD	2.10 g O_2/g substance
BOD (% of ThOD)	0.43 % ThOD

Proprietary Flavor Ingredient - P239	
Persistence and degradability	Readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	1.6 g O_2/g substance
Chemical oxygen demand (COD)	2.44 g O_2/g substance
ThOD	2.74 g O_2/g substance
BOD (% of ThOD)	0.59 % ThOD

Proprietary Flavor Ingredient - P312	
Persistence and degradability	Biodegradability in soil: no data available.

12.3. Bioaccumulative potential

0252 - Bourbon Type Flavor, Natural/Artificial	
Bioaccumulative potential	Not established.

Proprietary Flavor Ingredient – P314	
Bioaccumulative potential	No bioaccumulation data available

Proprietary Flavor Ingredient - P169	
BCF other aquatic organisms 1	12 (Estimated value)
Log Pow	1.73 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Proprietary Flavor Ingredient - p322	
Log Pow	-1.41 - -0.30
Bioaccumulative potential	Not bioaccumulative.

Proprietary Flavor Ingredient – P106	
Log Pow	1.05 (Experimental value; Other; 20°C)
Bioaccumulative potential	Low potential for bioacumulation (Log Kow < 4).

Proprietary Flavor Ingredient - p324	
BCF fish 1	1 (72 h; Cyprinus carpio)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Proprietary Flavor Ingredient - P239	
Log Pow	1.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Proprietary Flavor Ingredient - P312	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Proprietary Flavor Ingredient - P169	
Surface tension	0.025 N/m

Proprietary Flavor Ingredient - p322	
Surface tension	0.036 N/m (25 °C)

Proprietary Flavor Ingredient – P106	
Surface tension	0.04 N/m (20 °C)

Proprietary Flavor Ingredient - p324	
Surface tension	0.022 N/m (20 °C)

Proprietary Flavor Ingredient - P239	
Surface tension	0.024 N/m (20 °C)

12.5. Other adverse effects

Effect on ozone layer :

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to an approved waste disposal plant.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1197 Extracts, flavoring, liquid, 3, III

UN-No.(DOT) : UN1197

Proper Shipping Name (DOT) : Extracts, flavoring, liquid

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid

Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : B1 – If the material has a flash point at or abve 38 C (100F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T2 – 1.5 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

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DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A – The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

UN-No. (IMDG)	: 1197
Proper Shipping Name (IMDG)	: EXTRACTS, FLAVORING, LIQUID
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: III - substances presenting low danger

Air transport

UN-No. (IATA)	: 1197
Proper Shipping Name (IATA)	: Extracts, flavouring, liquid
Class (IATA)	: 3 - Flammable Liquids
Packing group (IATA)	: III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Proprietary Flavor Ingredient – P314
Listed on the United States TSCA (Toxic Substances Control Act) Inventory

Proprietary Flavor Ingredient - P169
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Proprietary Flavor Ingredient - p322
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15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

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Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

15.3. US State regulations

Proprietary Flavor Ingredient - P169
U.S. - New Jersey - Right to Know Hazardous Substance List

Proprietary Flavor Ingredient - p322
U.S. - New Jersey - Right to Know Hazardous Substance List

Proprietary Flavor Ingredient - p324
U.S. - New Jersey - Right to Know Hazardous Substance List

Proprietary Flavor Ingredient - P239
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information : DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H-phrases:

Acute Tox. 4 (inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment – Acute Hazard Category 2
Flam. Liq. 3	Flammable liquids Category 3
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H332	Harmful if inhaled
H401	Toxic to aquatic life