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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Blueberry Pie

1.2. Recommended use and restrictions on use

No additional information available

1.3.

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (ACCT# CCN725182)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 4
Acute toxicity (inhalation:dust,mist) Category 4

Combustible liquid Harmful if inhaled.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

Hazard statements (GHS US) : Combustible liquid

Harmful if inhaled.

Precautionary statements (GHS US) : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection. If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center or doctor if you feel unwell.

In case of fire: Use media other than water to extinguish.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container to hazardous or special waste collection point, in accordance with

local, regional, national and/or international regulation.

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
DPG	CAS-No.: 25265-71-8	50-80	Acute Tox. 4 (Inhalation:dust,mist), H332
Ethyl Vanillin	CAS-No.: 121-32-4	5-10	Eye Irrit. 2, H319
Ethyl Maltol	CAS-No.: 4940-11-8	1-5	Acute Tox. 4 (Oral), H302
Vanillin	CAS-No.: 121-33-5	1-5	Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor

if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting

: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures

: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing

dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment

 $: \ \, \text{Do not attempt to take action without suitable protective equipment. For further information refer}$

to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public

wat

Other information

: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures

 Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Blueberry Pie

No additional information available

Ethyl Maltol (4940-11-8)

No additional information available

Ethyl Vanillin (121-32-4)

No additional information available

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Vanillin (121-33-5)

No additional information available

DPG (25265-71-8)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):







SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Mixture contains one or more component(s) which have the following colour(s):

Colourless to light yellow Colourless Light yellow to colourless On exposure to air: yellow-brown White On exposure to light: yellow Light yellow Colourless to white White to off-white On exposure to light: turns yellow On exposure to air: turns yellow Colourless or light yellow Yellow to dark orange White to light yellow On exposure to light: discolours On exposure to air: brown

Odour : There may be no odour warning properties, odour is subjective and inadequate to warn of

overexposure.

 $\label{eq:mixture contains one or more component} \textbf{(s)} \ \text{which have the following odour:}$

Fruity odour Irritating/pungent odour Characteristic odour Almond odour Floral odour Almost odourless Phenol odour Unpleasant odour Cinnamon odour Pleasant odour Sweet odour

Medicinal odour Alcohol odour Aromatic odour Mild odour

Odour threshold : No data available

pH: No data availableMelting point: Not applicableFreezing point: No data availableBoiling point: No data available

Flash point : > 160 °F

Relative evaporation rate (butylacetate=1) : No data available Flammability (solid, gas) : Not applicable.

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Vapour pressure : No data available Relative vapour density at 20°C : No data available Relative density No data available Solubility No data available Partition coefficient n-octanol/water (Log Pow) : No data available Auto-ignition temperature No data available No data available Decomposition temperature No data available Viscosity, kinematic Viscosity, dynamic No data available **Explosive limits** No data available Explosive properties No data available Oxidising properties : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

Blueberry Pie	
ATE US (dust,mist)	2.863 mg/l/4h
Ethyl Maltol (4940-11-8)	
LD50 oral rat	1150 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	1150 mg/kg bodyweight

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Ethyl Vanillin (121-32-4)	
LD50 oral rat	> 3160 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
Vanillin (121-33-5)	
LD50 oral rat	3300 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
ATE US (oral)	3300 mg/kg bodyweight
DPG (25265-71-8)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)
LD50 dermal rabbit	> 5010 mg/kg bodyweight (Equivalent or similar to OECD 402, Rabbit, Male/female, Experimental value)
LC50 Inhalation - Rat	2.34 mg/l (Equivalent or similar to OECD 403, Rat, Male/female, Experimental value)
ATE US (vapours)	2.34 mg/l/4h
ATE US (dust,mist)	2.34 mg/l/4h
Skin corrosion/irritation	: Not classified
DPG (25265-71-8)	
рН	7 – 8 (5 %)
Serious eye damage/irritation	: Not classified
DPG (25265-71-8)	
рН	7 – 8 (5 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
DPG (25265-71-8)	
Viscosity, kinematic	118 mm²/s (20 °C)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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Ethyl Vanillin (121-32-4)			
LC50 - Fish [1]	87.6 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)		
EC50 - Crustacea [1]	36.79 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Read-across, GLP)		
ErC50 algae	120 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, GLP)		
Vanillin (121-33-5)			
LC50 - Fish [1]	57 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)		
EC50 - Crustacea [1]	36.79 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)		
ErC50 algae	120 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)		
DPG (25265-71-8)			
LC50 - Other aquatic organisms [1]	3181 mg/l (Other, 48 h, Xenopus laevis, Fresh water, Experimental value)		
EC50 72h - Algae [1]	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, Desmodesmus subspicatus, Fresh water, Experimental value)		

12.2. Persistence and degradability

Ethyl Maltol (4940-11-8)		
Persistence and degradability	Biodegradability in water: no data available.	
Ethyl Vanillin (121-32-4)		
Persistence and degradability	Readily biodegradable in water.	
ThOD	1.81 g O ₂ /g substance	
BOD (% of ThOD)	0.529 (5 day(s), Literature study)	
Vanillin (121-33-5)		
Persistence and degradability	Readily biodegradable in water.	
DPG (25265-71-8)		
Persistence and degradability	Readily biodegradable in water.	

12.3. Bioaccumulative potential

Ethyl Maltol (4940-11-8)		
Bioaccumulative potential	No bioaccumulation data available.	
Ethyl Vanillin (121-32-4)		
Partition coefficient n-octanol/water (Log Pow)	1.58 (Experimental value, Equivalent or similar to OECD 107, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
Vanillin (121-33-5)		
Partition coefficient n-octanol/water (Log Pow)	1.17 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)	

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Vanillin (121-33-5)		
Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).		
DPG (25265-71-8)		
Bioaccumulative potential	Bioaccumulation: not applicable.	

12.4. Mobility in soil

Ethyl Vanillin (121-32-4)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.092 (log Koc, Equivalent or similar to OECD 106, Experimental value)	
Ecology - soil	Low potential for mobility in soil.	
Vanillin (121-33-5)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.438 (log Koc, Experimental value)	
Ecology - soil	Low potential for mobility in soil.	
DPG (25265-71-8)		
Surface tension	71.4 mN/m (22 °C, 1.01 g/l)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.78 (log Koc, Calculated value)	
Ecology - soil	Low potential for adsorption in soil.	

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

TDG

Transport hazard class(es) (TDG) : Not applicable

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IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Ethyl Maltol	4940-11-8	Present	Active	
Ethyl Vanillin	121-32-4	Present	Active	
Vanillin	121-33-5	Present	Active	
DPG	25265-71-8	Present	Active	

15.2. International regulations

CANADA

Ethyl Maltol (4940-11-8)

Listed on the Canadian DSL (Domestic Substances List)

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Ethyl Vanillin (121-32-4)

Listed on the Canadian DSL (Domestic Substances List)

Vanillin (121-33-5)

Listed on the Canadian DSL (Domestic Substances List)

DPG (25265-71-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Ethyl Vanillin (121-32-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Vanillin (121-33-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

DPG (25265-71-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

Component	State or local regulations
DPG(25265-71-8)	U.S Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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