Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 11/21/2017 Revision date: 11/21/2017 Version: 1.1

SECTION 1: Identification	
1.1. Identification	
Product form	: Mixture
Product name	: CARAMEL MACCHIATO
CAS-No.	: N/A
1.2. Recommended use and restriction	ns on use
No additional information available	
1.4. Emergency telephone number	
Emergency number	: Chemtrec - USA: 800-424-9300
SECTION 2: Hazard(s) identificatio	n
2.1. Classification of the substance or	mixture
GHS-US classification	
Skin sensitization, Category 1	May cause an allergic skin reaction
2.2. GHS Label elements, including pr	acquitionary statements
GHS-US labeling	
Hazard pictograms (GHS-US)	
	GHS07
Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: May cause an allergic skin reaction
Precautionary statements (GHS-US)	: Avoid breathing dust/fume/gas/mist/vapors/spray.
r recationary statements (ChiS-CO)	Contaminated work clothing must not be allowed out of the workplace
	Wear protective gloves/protective clothing/eye protection/face protection.
	If on skin: Wash with plenty of water Specific treatment (see supplemental first aid instruction on this label)
	If skin irritation or rash occurs: Get medical advice/attention.
	Wash contaminated clothing before reuse.
	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
2.3. Other hazards which do not result	t in classification
No additional information available	
2.4. Unknown acute toxicity (GHS US)	
Not applicable	
SECTION 3: Composition/Informat	ion on ingredients
3.1. Substances	
Not applicable	
3.2. Mixtures	

Safety Data Sheet

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

Name	Product identifier	%	GHS-US classification
ETHYL VANILLIN	(CAS-No.) 121-32-4	1 - 5	Eye Irrit. 2B, H320
VANILLIN	(CAS-No.) 121-33-5	1 - 5	Eye Irrit. 2, H319
GAMMA DECALACTONE	(CAS-No.) 706-14-9	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319
4-Hydroxy-2,5-dimethyl-3(2H)-furanone	(CAS-No.) 3658-77-3	0.1 - 1	Eye Irrit. 2, H319 Skin Sens. 1A, H317
DIACETYL	(CAS-No.) 431-03-8	0.1 - 1	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373

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

SECT	ION 4: First-aid measures	
4.1.	Description of first aid measures	
	d measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-ai	d measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-ai	d measures after eye contact	: Rinse eyes with water as a precaution.
First-ai	d measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
4.2.	Most important symptoms and effe	ects (acute and delayed)
Sympto	ms/effects after skin contact	: May cause an allergic skin reaction.
4.3.	Immediate medical attention and s	pecial treatment, if necessary
Treat s	ymptomatically.	
SECT	ION 5: Fire-fighting measures	
5.1.	Suitable (and unsuitable) extinguis	
Suitable	e extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
5.2.	Specific hazards arising from the c	hemical
Reactiv	ity	: The product is non-reactive under normal conditions of use, storage and transport.
5.3.	Special protective equipment and	precautions for fire-fighters
Protect	ion during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
SECT	ION 6: Accidental release mea	sures
6.1.	Personal precautions, protective e	quipment and emergency procedures
6.1.1.	For non-emergency personnel	
Emerge	ency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
6.1.2.	For emergency responders	
Protect	ive equipment	: 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 r	elease to the environment.	
6.3.	Methods and material for containm	ent and cleaning up
Method	s for cleaning up	: Take up liquid spill into absorbent material.
Other in	nformation	: Dispose of materials or solid residues at an authorized site.
6.4.	Reference to other sections	
For furt	her information refer to section 13	

For further information refer to section 13.

Safety Data Sheet

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

Precautions for safe handling Hygiene measures Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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			
Precautions for safe handling Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear personal protective equipment. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Conditions for safe storage, including any incompatibilities Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Storage conditions Store in a well-ventilated place. Keep cool. Store placeble VANILLIN (121-32-4) Not applicable Store in a placeble Store placeble DIACETYL (431-03-8) ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02	SECTION 7: Handling ar	nd storage	
dust/fume/gas/mist/vapors/spray. Wear personal protective equipment. Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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	7.1. Precautions for safe	handling	
clothing before reuse. 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	Precautions for safe handling		
Storage conditions : Store in a well-ventilated place. Keep cool. SECTION 8: Exposure controls/personal protection 3.1. Control parameters ETHYL VANILLIN (121-32-4) Not applicable VANILLIN (121-33-5) Not applicable GAMMA DECALACTONE (706-14-9) Not applicable GAMMA DECALACTONE (706-14-9) Not applicable DIACETYL (431-03-8) ACGIH ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam	Hygiene measures	clothing before reuse	. Do not eat, drink or smoke when using this product. Always wash hands
SECTION 8: Exposure controls/personal protection 3.1. Control parameters ETHYL VANILLIN (121-32-4) Not applicable VANILLIN (121-33-5) Not applicable GAMMA DECALACTONE (706-14-9) Not applicable DIACETYL (431-03-8) ACGIH ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam	7.2. Conditions for safe s	storage, including any incompatibilities	
B.1. Control parameters ETHYL VANILLIN (121-32-4) Not applicable VANILLIN (121-33-5) Not applicable GAMMA DECALACTONE (706-14-9) Not applicable DIACETYL (431-03-8) ACGIH ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam	Storage conditions	: Store in a well-ventila	ted place. Keep cool.
DIACETYL (431-03-8) ACGIH ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam 4-Hydroxy-2,5-dimethyl-3(2H-turanone (3658-77-3)	Not applicable VANILLIN (121-33-5) Not applicable GAMMA DECALACTONE (70	06-14-9)	
ACGIH ACGIH TWA (ppm) 0.01 ppm ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3) Component of the second secon			
ACGIH ACGIH STEL (ppm) 0.02 ppm ACGIH Remark (ACGIH) Lung dam 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	· · · ·	ACGIH TWA (ppm)	0.01 ppm
4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	ACGIH	ACGIH STEL (ppm)	
	ACGIH	Remark (ACGIH)	Lung dam
	4-Hydroxy-2 5-dimethyl-3(2H)-furanone (3658-77-3)	1

8.2.	Appropriate engineering controls	
•••••	iate engineering controls mental exposure controls	Ensure good ventilation of the work station.Avoid release to the environment.
8.3.	Individual protection measures/Per	sonal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and che	emical properties	
Physical state	: Liquid	
Color	PALE YELLOW TO YELLOW/AMBER	
Odor	CHARACTERISTIC, MATCHING THE RETAINER SAMPLE.	
Odor threshold	No data available	
pH	No data available	
Melting point	No data available	

Safety Data Sheet

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

Freezing point	: No data available
Boiling point	: No data available
Flash point	: 142 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.947 (0.937 - 0.957)
Solubility	: Insoluble.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
9.2. Other information	

Refractive index

: 1.459 (1.449 - 1.469)

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 u	inder normal conditions.
10.3.	Possibility of hazardous reactions
No dang	gerous reactions known under normal conditions of use.
10.4.	Conditions to avoid
None ur	nder recommended storage and handling conditions (see section 7).
10.5.	Incompatible materials
No addit	tional information available
10.6.	Hazardous decomposition products
Under n	ormal conditions of storage and use, hazardous decomposition products should not be produced.
SECTI	ON 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
ETHYL VANILLIN (121-32-4)	
ATE US (oral)	3000 mg/kg body weight
VANILLIN (121-33-5)	
LD50 oral rat	3300 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value, Dermal, 14 day(s))
ATE US (oral)	3300 mg/kg body weight
GAMMA DECALACTONE (706-14-9)	
LD50 oral rat	5000 mg/kg (Rat, Oral)
ATE US (oral)	5000 mg/kg body weight
DIACETYL (431-03-8)	
ATE US (oral)	1580 mg/kg body weight
ATE US (gases)	700 ppmV/4h
04/02/2019	EN (English US) 4/7

Safety Data Sheet

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

DIACETYL (431-03-8)	
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
4-Hydroxy-2,5-dimethyl-3(2H)-furanone (365	3-77-3)
ATE US (oral)	2500 mg/kg body weight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
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	: Not classified
exposure	
Aspiration hazard	: Not classified
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
SECTION 12: Ecological information	
12.1. Toxicity	

Ecology - general

: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

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 Daphnia 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)

12.2. Persistence and degradability

VANILLIN (121-33-5)	
Persistence and degradability	Readily biodegradable in water.
GAMMA DECALACTONE (706-14-9)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

VANILLIN (121-33-5)		
1.17 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)		
Low potential for bioaccumulation (Log Kow < 4).		
GAMMA DECALACTONE (706-14-9)		
No bioaccumulation data available.		

12.4. Mobility in soil

VANILLIN (121-33-5)	
Log Koc	3.438 (log Koc, Experimental value)
Ecology - soil	Low potential for mobility in soil.

Safety Data Sheet

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

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

Department of Transportation (DOT)

In accordance with DOT Not regulated

Transportation of Dangerous Goods Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

ETHYL VANILLIN (121-32-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
VANILLIN (121-33-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
GAMMA DECALACTONE (706-14-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
DIACETYL (431-03-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations CANADA

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)
GAMMA DECALACTONE (706-14-9)
Listed on the Canadian DSL (Domestic Substances List)
DIACETYL (431-03-8)
Listed on the Canadian DSL (Domestic Substances List)
4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

Safety Data Sheet

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

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

DIACETYL (431-03-8)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date

: 11/21/2017

Full text of H-phrases:

text of H-phrases:		
H224	Extremely flammable liquid and vapour	
H302	Harmful if swallowed	
H315	Causes skin irritation	
H317	May cause an allergic skin reaction	
H318	Causes serious eye damage	
H319	Causes serious eye irritation	
H320	Causes eye irritation	
H331	Toxic if inhaled	
H373	May cause damage to organs through prolonged or repeated exposure	

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product