APEX FLAVORS, INC.

SAFETY DATA SHEET.

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Date 16-Jul-2018 **Version** 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 738CON
Product name YELLOW CAKE TYPE, NATURAL FLAVOR BLEND (OIL SOLUBLE)

Pure substance/mixture Mixture
Contains BENZYL ALCOHOL

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

Recommended Use Ingredient for further processing

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Apex Flavors, Inc.
1371 Brass Mill Rd.
Suite A
Belcamp, MD 21017
(410) 565-6600

For further information, please contact:

E-mail Address cpisano@apexflavors.com

1.4. Emergency telephone number

Emergency telephone Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 2 - (H330)
Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Product identifier
Contains BENZYL ALCOHOL

Signal Word

Danger

Hazard Statements
H319 - Causes serious eye irritation
H330 - Fatal if inhaled

Precautionary Statements - EU (§28, 1272/2008)
P310 - Immediately call a POISON CENTER or doctor
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P320 - Specific treatment is urgent (see .? on this label)

2.3. Other information
No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
BENZYL ALCOHOL	202-859-9	100-51-6	10-15%	Acute Tox. 5 (H333) Acute Tox. 4 (H302)	No data available
HEXANOIC ACID (CAPROIC ACID)	Present	142-62-1	<1%	Aquatic Acute 3 (H402) (EFFA) Skin Corr. 1C (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 5 (H303)(EFFA) Acute Tox. 3 (H311)(EFFA)	No data available
CAPRYLIC ACID	204-677-5	124-07-2	<1%	Skin Corr. 1C (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 4 (H302) (EFFA) Acute Tox. 3 (H311)(EFFA)	No data available
ISOAMYL ACETATE	Present	123-92-2	<1%	Aquatic Acute 3 (H402) (EFFA) (EUH066) Flam. Liq. 3 (H226)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Inhalation Move to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. Immediate medical attention is not required. If skin irritation persists, call a physician.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment.

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

Main Symptoms No information available.

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use. Dry chemical. Carbon dioxide CO_2. Water spray. Alcohol-resistant foam.

Unsuitable extinguishing media
No information available

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition Risk of ignition

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers. Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Soak up with inert absorbent material. Dam up. Take precautionary measures against static discharges.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and open flame. No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

General Hygiene Considerations
When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from heat and sources of ignition. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible products
None known based on information supplied.

7.3 Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
ISOAMYL ACETATE 123-92-2	TWA 50 ppm TWA 270 mg/m³ STEL 100 ppm STEL 540 mg/m³	TWA: 50 ppm TWA: 270 mg/m³	TWA: 50 ppm TWA: 270 mg/m³ STEL: 100 ppm STEL: 540 mg/m³	STEL: 100 ppm STEL: 540 mg/m³ TWA: 50 ppm TWA: 270 mg/m³	-
Chemical Name	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
BENZYL ALCOHOL 100-51-6	-	-	-	TWA: 10 ppm TWA: 45 mg/m³	-
ISOAMYL ACETATE 123-92-2	TWA: 50 ppm TWA: 270 mg/m³ STEL: 100 ppm STEL: 540 mg/m³	STEL: 100 ppm STEL: 540 mg/m³ TWA: 50 ppm	STEL: 530 mg/m³	TWA: 50 ppm TWA: 270 mg/m³ STEL: 100 ppm STEL: 540 mg/m³	TWA: 50 ppm TWA: 271 mg/m³
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
BENZYL ALCOHOL 100-51-6	-	-	NDS: 240 mg/m³	-	-
ISOAMYL ACETATE 123-92-2	STEL 100 ppm STEL 540 mg/m³ TWA: 50 ppm TWA: 270 mg/m³	TWA: 50 ppm TWA: 260 mg/m³	STEL: 500 mg/m³ TWA: 250 mg/m³	TWA: 50 ppm TWA: 260 mg/m³ STEL: 75 ppm STEL: 325 mg/m³	TWA: 50 ppm TWA: 260 mg/m³ STEL: 100 ppm STEL: 520 mg/m³

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Tightly fitting safety goggles.

Skin and body protection Long sleeved clothing. Chemical resistant apron. Antistatic boots. Impervious gloves.

Environmental Exposure Controls Do not allow material to contaminate ground water system.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid
Appearance	clear
Odor	sweet vanilla creamy
Color	yellow

Property	**Values**	**• Method**
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		FCC Method
Flash Point	67 °C / 153 °F	Closed cup
Evaporation rate		FCC Method
Flammability (solid, gas)		No information available
Flammability Limits in Air		
Upper flammability limit		No information available
lower flammability limit		No information available
Vapor pressure mm Hg 20°C		No information available
Vapor density		No information available
Relative density		No information available
Specific Gravity @ 25C	0.9352 - 0.9652	FCC Method
Specific Gravity @ 20C	0.9382 - 0.9682	FCC Method
Refractive Index	1.4561 - 1.4861	FCC Method
Water solubility		No information available
Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		No information available
Viscosity, dynamic		No information available
Explosive properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Softening point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density VALUE	No information available
Bulk Density VALUE	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data
Sensitivity to Mechanical Impact none.
Sensitivity to Static Discharge Yes.

10.3. Possibility of hazardous reactions

Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation There is no data available for this product.
Eye contact There is no data available for this product.
Skin contact There is no data available for this product.
Ingestion There is no data available for this product.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,639.00 mg/kg
ATEmix (dermal) 2,338.00 mg/kg
ATEmix (inhalation-dust/mist) 0.06 mg/l
ATEmix (inhalation-vapor) 13.00 mg/l

Unknown Acute Toxicity
97.686% of the mixture consists of ingredient(s) of unknown toxicity.
55.16 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
73.16 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
97.686 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
84.66 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
84.66 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
BENZYL ALCOHOL	1230 mg/kg (Rat)	2000 mg/kg (Rabbit)	8.8 mg/L (Rat) 4 h
ACETYL METHYL CARBINOL	5 g/kg (Rat)	5 g/kg (Rabbit)	
CAPRYLIC ACID	10080 mg/kg (Rat)	5 g/kg (Rabbit)	
DECANOIC ACID	3320 mg/kg (Rat)	5000 mg/kg (Rabbit)	
ETHYL PROPIONATE	8732 mg/kg (Rat)		
ETHYL BUTYRATE	13 g/kg (Rat)	2 g/kg (Rabbit)	
ISOAMYL ACETATE	16600 mg/kg (Rat)	5 g/kg (Rabbit)	

Skin corrosion/irritation No information available.

Eye damage/irritation No information available.

Sensitization No information available.

Germ Cell Mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

Specific target organ systemic toxicity (single exposure) No information available.

Specific target organ systemic toxicity (repeated exposure) No information available.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

0.35% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
BENZYL ALCOHOL	35: 3 h Anabaena variabilis mg/L EC50	10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static	23: 48 h water flea mg/L EC50
HEXANOIC ACID (CAPROIC ACID)	-	306 - 334: 96 h Pimephales promelas mg/L LC50 flow-through 88: 96 h Pimephales promelas mg/L LC50 static	22: 24 h water flea mg/L EC50
CAPRYLIC ACID	-	310: 96 h Oryzias latipes mg/L LC50 semi-static 110: 96 h Brachydanio rerio mg/L LC50 semi-static	170: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	log Pow
BENZYL ALCOHOL	1.1
HEXANOIC ACID (CAPROIC ACID)	1.92
CAPRYLIC ACID	2.92

12.4. Mobility in soil

Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty remaining contents.
Other Information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG / IMO

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated

DOT/ADR/RID

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated

ICAO/IATA

14.1 UN/ID No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

Legend:

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
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

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

Full text of R-phrases referred to under sections 2 and 3
R27 - Very toxic in contact with skin
R22 - Harmful if swallowed
R24 - Toxic in contact with skin
R21 - Harmful in contact with skin
R20/22 - Harmful by inhalation and if swallowed

Full text of H-Statements referred to under section 3
H333 - May be harmful if inhaled
H302 - Harmful if swallowed
H402 - Harmful to aquatic life
H226 - Flammable liquid and vapor
H318 - Causes serious eye damage
H311 - Toxic in contact with skin
H303 - May be harmful if swallowed
EUH066 - Repeated exposure may cause skin dryness or cracking

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA:	Time weighted average	STEL:	Short term exposure limit
Ceiling:	Maximum limit value:	*	Skin designation

Revision Date 16-Jul-2018

Reason for revision: Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.