



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1. Product identifier**

**Number** 164BEV

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

**Product name** BOURBON TYPE EXTRACT, NATURAL FLAVOR BLEND  
**Pure substance/mixture** Mixture

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

**Recommended Use** No information available

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

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

## 2. HAZARDS IDENTIFICATION

**2.1. Classification of the substance or mixture**

Acute oral toxicity	Category 5
Acute inhalation toxicity - dust/mist	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1A
Acute aquatic toxicity	Category 2
Flammable liquids	Category 3

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**  
For the full text of the R-phrases mentioned in this Section, see Section 16

**2.2. Label elements**

**Signal Word**

Danger

**Hazard Statements**

H303 - May be harmful if swallowed

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H350 - May cause cancer

H401 - Toxic to aquatic life

H226 - Flammable liquid and vapor

**Precautionary Statements**

P321 - Specific treatment (see .? on this label)

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P201 - Obtain special instructions before use

P281 - Use personal protective equipment as required

P308 + P313 - IF exposed or concerned: Get medical advice/ attention

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

**2.3. Other information****3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	EC-No	CAS-No	Alternate CAS #	Weight %	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
ETHYL ALCOHOL	200-578-6	64-17-5		30-50%	F; R11	Flam. Liq. 2 (H225) Flam. Liq. 2 (H225)	No data available
GLYCERINE	Present	56-81-5		15-20%	-	No data available	No data available
ISOAMYL ALCOHOL	204-633-5	123-51-3		10-15%	-	Flam. Liq. 3 (H226)(EFA) Acute Tox. 4 (H332)(EFA)	No data available

FURFURAL	Present	98-01-1		<1	Xn; R21 T; R23/25 Xi; R36/37/38 Carc.Cat.3; R40	Acute Tox. 3 (H301) Carc. 2 (H351) (EFLA) Eye Irrit. 1 (H319) (EFLA) Skin Irrit. 2 (315) (EFLA) Acute Tox. 3 (H301) (EFLA) Acute Tox. 4 (H312)(EFLA) Flam. Liq. 4 (H227)(EFLA) Acute Tox. 3 (H331)(EFLA) Carc. 2 (H351) Eye Irrit. 1 (H319) Skin Irrit. 2 (H315) Acute Tox. 3 (H301) Acute Tox. 4 (H312) Acute Tox. 3 (H331) Acute Tox. 4 (H312) Skin Irrit. 2 (H315) STOT SE 3 (H335) Carc. 2 (H351) Acute Tox. 3 (H331) Eye Irrit. 2 (H319)	No data available
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For the full text of the R-phrases mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

**4.1. Description of first aid measures**

- Eye contact**                                      Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact**                                     Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
- Ingestion**                                         Clean mouth with water and drink afterwards plenty of water.
- Inhalation**                                         Move to fresh air.

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

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

**Note to physicians** Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

**5.1. Extinguishing media**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Extinguishing media which shall not be used for safety reasons**

No information available

**5.2. Special hazards arising from the substance or mixture**

**Special Hazard**

None

**5.3. Advice for firefighters**

**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear

### 6. ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation.

See Section 12 for additional Ecological Information

**6.2. Environmental precautions**

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

**7. HANDLING AND STORAGE****7.1. Precautions for safe handling**

Ensure adequate ventilation.

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

Keep container tightly closed in a dry and well-ventilated place.

**7.3 Specific end use(s)**

Exposure scenario N/A

Other Guidelines N/A

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

**Exposure limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
ETHYL ALCOHOL 64-17-5		STEL: 3000 ppm STEL: 5760 mg/m <sup>3</sup> TWA: 1000 ppm TWA: 1920 mg/m <sup>3</sup>	VME: 1000 ppm VME: 1900 mg/m <sup>3</sup> VLCT: 5000 ppm VLCT: 9500 mg/m <sup>3</sup>	VLA-ED: 1000 ppm VLA-ED: 1910 mg/m <sup>3</sup>	MAK: 500 ppm MAK: 960 mg/m <sup>3</sup> Ceiling / Peak: 1000 ppm Ceiling / Peak: 1920 mg/m <sup>3</sup> Skin TWA: 500 ppm TWA: 960 mg/m <sup>3</sup>
GLYCERINE 56-81-5		STEL: 30 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 50 mg/m <sup>3</sup> Ceiling / Peak: 100 mg/m <sup>3</sup>
ISOAMYL ALCOHOL 123-51-3		STEL: 125 ppm STEL: 458 mg/m <sup>3</sup> TWA: 100 ppm TWA: 366 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>	STEL: 125 ppm STEL: 458 mg/m <sup>3</sup> TWA: 100 ppm TWA: 366 mg/m <sup>3</sup>	TWA: 20 ppm TWA: 73 mg/m <sup>3</sup> Ceiling / Peak: 80 ppm Ceiling / Peak: 292 mg/m <sup>3</sup>
FURFURAL 98-01-1		STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> Skin	STEL: 2 ppm STEL: 8 mg/m <sup>3</sup>	S* TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	Skin

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
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ETHYL ALCOHOL 64-17-5		TWA: 1000 ppm	Skin STEL: 1900 mg/m <sup>3</sup> TWA: 260 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> STEL: 1300 ppm STEL: 2500 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
GLYCERINE 56-81-5		TWA: 10 mg/m <sup>3</sup>		TWA: 20 mg/m <sup>3</sup>	
ISOAMYL ALCOHOL 123-51-3		STEL: 125 ppm TWA: 100 ppm		TWA: 100 ppm TWA: 370 mg/m <sup>3</sup> STEL: 150 ppm STEL: 550 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>
FURFURAL 98-01-1		TWA: 2 ppm		TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> Skin	TWA: 2 ppm TWA: 7.9 mg/m <sup>3</sup> Skin

Chemical Name	Austria	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	Poland	Norway
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m <sup>3</sup> MAK: 1000 ppm MAK: 1900 mg/m <sup>3</sup>	500 ppm NGV 1000 mg/m <sup>3</sup> NGV	STEL: 1000 ppm STEL: 1920 mg/m <sup>3</sup> MAK: 500 ppm MAK: 960 mg/m <sup>3</sup>	NDS: 1900 mg/m <sup>3</sup>	TWA: 500 ppm TWA: 950 mg/m <sup>3</sup> STEL: 625 ppm STEL: 1187.5 mg/m <sup>3</sup>
GLYCERINE 56-81-5			STEL: 100 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	
ISOAMYL ALCOHOL 123-51-3	STEL 200 ppm STEL 720 mg/m <sup>3</sup> TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>		STEL: 80 ppm STEL: 292 mg/m <sup>3</sup> TWA: 20 ppm TWA: 73 mg/m <sup>3</sup>	STEL: 400 mg/m <sup>3</sup> TWA: 200 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 180 mg/m <sup>3</sup> STEL: 75 ppm STEL: 225 mg/m <sup>3</sup>
FURFURAL 98-01-1	Skin TWA: 5 ppm TWA: 20 mg/m <sup>3</sup>	2 ppm NGV 8 mg/m <sup>3</sup> NGV	Skin TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	STEL: 25 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> Skin STEL: 4 ppm STEL: 16 mg/m <sup>3</sup>

Component	Ireland
ETHYL ALCOHOL 64-17-5 ( 30-50% )	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
GLYCERINE 56-81-5 ( 15-20% )	TWA: 10 mg/m <sup>3</sup>
ISOAMYL ALCOHOL 123-51-3 ( 10-15% )	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 125 ppm STEL: 450 mg/m <sup>3</sup>
FURFURAL 98-01-1 ( <1 )	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> Skin

**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 Protection** Tightly fitting safety goggles
- Hand Protection** Protective gloves
- Skin and body protection** Long sleeved clothing

<b>Respiratory protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental Exposure Controls</b>	No information available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Appearance</b>	clear
<b>Odor</b>	typical of bourbon	<b>Color</b>	yellow
<b>Property</b>	<b>Values</b>	<b>Method</b>	
pH		No information available	
Melting/freezing point		No information available	
Boiling point/boiling range		FCC Method	
Flash Point	24 °C / 76 °F	Closed cup	
Evaporation rate		FCC Method	
Flammability (solid, gas)		No information available	
Flammability Limits in Air		No information available	
Upper flammability limit			
lower flammability limit			
Vapor pressure mm Hg 20°C		No information available	
Vapor density		No information available	
Relative density		No information available	
Specific Gravity @ 25C	0.9145 - 0.9445	FCC Method	
Specific Gravity @ 20C	0.9175 - 0.9475	FCC Method	
Refractive Index	1.3727 - 1.4027	FCC Method	
Water solubility		No information available	
Partition coefficient: n-octanol/water		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, dynamic		No information available	
<b>Explosive properties</b>	No information available		
<b>Oxidizing Properties</b>	No information available		

### 9.2. Other information

<b>VOC Content(%)</b>	61.9609980788082
<b>Molecular Weight</b>	No information available

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

### 10.4. Conditions to avoid

Heat, flames and sparks

### 10.5. Incompatible materials

No materials to be especially mentioned

**10.6. Hazardous decomposition products**

None under normal use conditions

**11. TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Acute toxicity**

<b>Inhalation</b>	There is no data available for this product
<b>Eye contact</b>	There is no data available for this product
<b>Skin contact</b>	There is no data available for this product
<b>Ingestion</b>	There is no data available for this product
<b>Acute toxicity</b>	22.710384% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 1, 2005):

<b>Oral</b>	4,093.00 mg/kg
<b>Dermal</b>	13,798.00 mg/kg

**Inhalation**

<b>Mist</b>	0.97 mg/l
<b>Vapor</b>	63.00 mg/l

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
ETHYL ALCOHOL	7060 mg/kg ( Rat )		124.7 mg/L ( Rat ) 4 h
GLYCERINE		10 g/kg ( Rabbit )	570 mg/m <sup>3</sup> ( Rat ) 1 h
ISOAMYL ALCOHOL	1300 mg/kg ( Rat )	3970 µL/kg ( Rabbit )	
FURFURAL	125 mg/kg ( Rat )	500 - 1000 mg/kg ( Rabbit )	175 ppm ( Rat ) 6 h

<b>Skin corrosion/irritation</b>	No information available
<b>Eye damage/irritation</b>	No information available
<b>Sensitization</b>	No information available
<b>Germ Cell Mutagenicity</b>	No information available
<b>Carcinogenicity</b>	No information available

<b>Specific target organ systemic toxicity (single exposure)</b>	No information available
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<b>Specific target organ systemic toxicity (repeated exposure)</b>	No information available
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<b>Target Organ Effects</b>	Blood Central nervous system Eyes Kidney Liver Reproductive system Respiratory system Skin
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<b>Aspiration hazard</b>	No information available
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**12. ECOLOGICAL INFORMATION****12.1. Toxicity**

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
ETHYL ALCOHOL		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
GLYCERINE		51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	500: 24 h Daphnia magna mg/L EC50
ISOAMYL ALCOHOL	493: 72 h Desmodesmus subspicatus mg/L EC50 181: 96 h Desmodesmus subspicatus mg/L EC50	700: 96 h Salmo gairdneri mg/L LC50 static	260: 48 h Daphnia magna mg/L EC50
FURFURAL		13.4 - 19.3: 96 h Pimephales promelas mg/L LC50 static 16.79 - 26.35: 96 h Pimephales promelas mg/L LC50 flow-through	29: 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
ETHYL ALCOHOL	-0.32
GLYCERINE	-1.76
ISOAMYL ALCOHOL	1.28
FURFURAL	0.67

### 12.4. Mobility in soil

No information available

### 12.5. Results of PBT and vPvB assessment

### 12.6. Other adverse effects

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
FURFURAL	Group III Chemical		

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from residues / unused products** Dispose of in accordance with local regulations

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal

## 14. TRANSPORT INFORMATION

DOT

IMDG / IMO



<b>Proper shipping name</b>	EXTRACTS, FLAVOURING, LIQUID
<b>Hazard class</b>	3
<b>UN/ID No</b>	1197
<b>Packing Group</b>	III

**ICAO/IATA**

<b>UN/ID No</b>	1197
<b>Proper shipping name</b>	EXTRACTS, FLAVOURING, LIQUID
<b>Hazard class</b>	3
<b>Packing Group</b>	III
<b>ERG Code</b>	127

## 15. REGULATORY INFORMATION

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

#### WGK Classification

Chemical Name	Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes
ETHYL ALCOHOL 64-17-5	Hazard Class 1
GLYCERINE 56-81-5	Hazard Class 1
ISOAMYL ALCOHOL 123-51-3	Hazard Class 1
FURFURAL 98-01-1	Hazard Class 2

#### International Inventories

All of the components in the product are on the following Inventory lists: No information available.

<b>TSCA</b>	-
<b>EINECS/ELINCS</b>	-
<b>DSL/NDL</b>	-
<b>PICCS</b>	-
<b>ENCS</b>	-
<b>IECSC</b>	-
<b>AICS</b>	-
<b>KECL</b>	-

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

### 15.2. Chemical safety assessment

## 16. OTHER INFORMATION

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**Full text of H-Statements referred to under sections 2 and 3**

H226 - Flammable liquid and vapor H332 - Harmful if inhaled H225 - Highly flammable liquid and vapor H301 - Toxic if swallowed H351 - Suspected of causing cancer if inhaled H319 - Causes serious eye irritation H312 - Harmful in contact with skin H227 - Combustible liquid H331 - Toxic if inhaled H315 - Causes skin irritation H335 - May cause respiratory irritation

<b>Revision Date</b>	16-Mar-2016
<b>Revision Note</b>	Not applicable.
<b>Revision#</b>	1

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

**WARNING/DISCLAIMER:**

Apex Flavors, Inc.'s products are sold exclusively for use in food and drink for human consumption. These products have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, and electronic cigarettes or similar devices (collectively "E-Cigarettes"). In supplying this product(s), Apex Flavors, Inc. instructs, and purchasing recipient confirms, that this product(s) will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof. Recipients of our products that use them outside of their intended use of food or drink do so at their own risk and without warranty, either expressed or implied, from Apex Flavors, Inc. or its suppliers. The user assumes all liability for loss, injury, damage, or expense resulting from such uses.

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