



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

Revision Date 07-Apr-2017

Version 1

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

### 1.1. Product identifier

**Product Code(s)** 057BEV  
**Product name** BLACK CURRANT TYPE (CASSIS), NATURAL FLAVOR BLEND

**Pure substance/mixture** Mixture  
 Contains ETHYL 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

<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Carcinogenicity</b>	Category 1A - (H350)
<b>Flammable liquids</b>	Category 3 - (H226)

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

#### R-code(s)

R10

### 2.2. Label elements

**Product identifier**  
 Contains ETHYL ALCOHOL



**Signal Word**  
Danger

**Hazard Statements**

H319 - Causes serious eye irritation  
H350 - May cause cancer  
H226 - Flammable liquid and vapor

**Precautionary Statements - EU (§28, 1272/2008)**

P201 - Obtain special instructions before use  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P370 + P378 - In case of fire: Use .? to extinguish  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

**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 Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
PROPYLENE GLYCOL	200-338-0	57-55-6	30-50%	-	No data available	No data available
GLYCERINE	Present	56-81-5	20-30%	-	No data available	No data available
ETHYL ALCOHOL	200-578-6	64-17-5	10-15%	F; R11	Flam. Liq. 2 (H225) Flam. Liq. 2 (H225)	No data available
ISOAMYL ACETATE	Present	123-92-2	<1%	R10 R66	Aquatic Acute 3 (H402) (EFFA) (EUH066) Flam. Liq. 3 (H226)	No data available
BENZALDEHYDE	Present	100-52-7	<1%	Xn; R22	Acute Tox. 4 (H302) Aquatic Acute 2 (H401) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 3 (316) (EFFA) Acute Tox. 4 (H302) (EFFA) Flam. Liq. 4 (H227)(EFFA) Acute Tox. 4 (H332)(EFFA) Aquatic Acute 2 (H401) Eye Irrit. 1 (H319) Skin Irrit. 3 (H316) Acute Tox. 4 (H302) Acute Tox. 4 (H332)	No data available
ISOBUTYL ACETATE	Present	110-19-0	<1%	F; R11 R66	Aquatic Acute 3 (H402) (EFFA) Flam. Liq. 2 (H225) (EFFA) (EUH066) Flam. Liq. 2 (H225)	No data available
ISOAMYL ALCOHOL	204-633-5	123-51-3	<1%	-	Flam. Liq. 3 (H226)(EFFA) Acute Tox. 4 (H332)(EFFA)	No data available

BENZYL ACETATE	Present	140-11-4	<1%	-	Aquatic Acute 2 (H401) (EFFA) Skin Irrit. 3 (316) (EFFA) Acute Tox. 5 (H303)(EFFA) Flam. Liq. 4 (H227)(EFFA) Aquatic Acute 2 (H401) Skin Irrit. 3 (H316) Acute Tox. 5 (H303)	No data available
ACETOPHENONE	202-708-7	98-86-2	<1%	Xn; R22 Xi; R36	Acute Tox. 4 (H302) Eye Irrit. 1 (H319) (EFFA) Acute Tox. 4 (H302) (EFFA) Eye Irrit. 2 (H319)	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

<b>General advice</b>	Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Move to fresh air.
<b>Skin contact</b>	Wash off immediately with plenty of water.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.
<b>Self-protection of the first aider</b>	Remove all sources of ignition.

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

#### **Unsuitable extinguishing media**

No information available

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

Thermal decomposition can lead to release of irritating gases and vapors

### 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

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation.

#### For emergency responders

Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

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

Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

### 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

Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

#### 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 tightly closed in a dry and cool place. 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
PROPYLENE GLYCOL 57-55-6	-	STEL: 450 ppm STEL: 1422 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>	-	-	-

		TWA: 150 ppm TWA: 474 mg/m <sup>3</sup> TWA: 10 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>	-
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>	-
ISOAMYL ACETATE 123-92-2	TWA 50 ppm TWA 270 mg/m <sup>3</sup> STEL 100 ppm STEL 540 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 540 mg/m <sup>3</sup> TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	-
ISOBUTYL ACETATE 110-19-0	-	STEL: 187 ppm STEL: 903 mg/m <sup>3</sup> TWA: 150 ppm TWA: 724 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 940 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 724 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>	-
BENZYL ACETATE 140-11-4	-	-	-	TWA: 10 ppm TWA: 62 mg/m <sup>3</sup>	-
ACETOPHENONE 98-86-2	-	-	-	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	-
<b>Chemical Name</b>	<b>Italy</b>	<b>Portugal</b>	<b>The Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
GLYCERINE 56-81-5	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 20 mg/m <sup>3</sup>	-
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>
ISOAMYL ACETATE 123-92-2	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 540 mg/m <sup>3</sup> TWA: 50 ppm	STEL: 530 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 271 mg/m <sup>3</sup>
BENZALDEHYDE 100-52-7	-	-	-	TWA: 1 ppm TWA: 4.4 mg/m <sup>3</sup> STEL: 4 ppm STEL: 17.4 mg/m <sup>3</sup> Ceiling: 4 ppm Ceiling: 17.4 mg/m <sup>3</sup>	-
ISOBUTYL ACETATE 110-19-0	-	TWA: 150 ppm	-	TWA: 150 ppm TWA: 720 mg/m <sup>3</sup> STEL: 200 ppm STEL: 960 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 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>
BENZYL ACETATE 140-11-4	-	TWA: 10 ppm	-	-	TWA: 10 ppm TWA: 61 mg/m <sup>3</sup>
ACETOPHENONE 98-86-2	-	TWA: 10 ppm	-	TWA: 5 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>
<b>Chemical Name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
PROPYLENE GLYCOL 57-55-6	-	-	-	TWA: 25 ppm TWA: 79 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 118.5 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 470 mg/m <sup>3</sup> TWA: 10 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>	-	TWA: 10 mg/m <sup>3</sup>
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>	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>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
ISOAMYL ACETATE 123-92-2	STEL 100 ppm STEL 540 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup>	STEL: 500 mg/m <sup>3</sup> TWA: 250 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup>

	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>			STEL: 75 ppm STEL: 325 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 520 mg/m <sup>3</sup>
BENZALDEHYDE 100-52-7	-	-	STEL: 40 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	-	-
ISOBUTYL ACETATE 110-19-0	STEL 100 ppm STEL 480 mg/m <sup>3</sup> TWA: 100 ppm TWA: 480 mg/m <sup>3</sup> Ceiling 100 ppm Ceiling 480 mg/m <sup>3</sup>	STEL: 200 ppm STEL: 960 mg/m <sup>3</sup> TWA: 100 ppm TWA: 480 mg/m <sup>3</sup>	STEL: 400 mg/m <sup>3</sup> TWA: 200 mg/m <sup>3</sup>	-	TWA: 150 ppm TWA: 700 mg/m <sup>3</sup> STEL: 187 ppm STEL: 875 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>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 125 ppm STEL: 450 mg/m <sup>3</sup>
ACETOPHENONE 98-86-2	-	-	STEL: 100 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup>	-	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>

**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**

Antistatic boots. Wear fire/ flame resistant/ retardant clothing. Impervious gloves.

**Environmental Exposure Controls** No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** liquid  
**Appearance** clear  
**Odor** Black currant  
**Color** clear

#### Property

#### Values

#### • Method

<b>pH</b>		No information available
<b>Melting/freezing point</b>		No information available
<b>Boiling point/boiling range</b>		FCC Method
<b>Flash Point</b>	42 °C / 107 °F	Closed cup
<b>Evaporation rate</b>		FCC Method
<b>Flammability (solid, gas)</b>		No information available
<b>Flammability Limits in Air</b>		
<b>Upper flammability limit</b>		No information available
<b>lower flammability limit</b>		No information available
<b>Vapor pressure mm Hg 20°C</b>		No information available
<b>Vapor density</b>		No information available
<b>Relative density</b>		No information available
<b>Specific Gravity @ 25C</b>	1.044 - 1.064	FCC Method
<b>Specific Gravity @ 20C</b>	1.047 - 1.067	FCC Method
<b>Refractive Index</b>	1.3847 - 1.4147	FCC Method
<b>Water solubility</b>		No information available
<b>Solubility in other solvents</b>		No information available
<b>Partition coefficient: n-octanol/water</b>		No information available
<b>Autoignition temperature</b>		No information available
<b>Decomposition temperature</b>		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.

<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.

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

<b>ATEmix (oral)</b>	13,963.00 mg/kg
<b>ATEmix (dermal)</b>	14,912.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	240.09 mg/l

**Unknown Acute Toxicity**

98.71% of the mixture consists of ingredient(s) of unknown toxicity.

51.585 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

40.91 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

98.71 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

98.71 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

63.785 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	
GLYCERINE		10 g/kg ( Rabbit )	570 mg/m <sup>3</sup> ( Rat ) 1 h
ETHYL ALCOHOL	7060 mg/kg ( Rat )		124.7 mg/L ( Rat ) 4 h
ISOAMYL ACETATE	16600 mg/kg ( Rat )	5 g/kg ( Rabbit )	
ETHYL BUTYRATE	13 g/kg ( Rat )	2 g/kg ( Rabbit )	
BENZALDEHYDE	1292 mg/kg ( Rat )	1250 mg/kg ( Rabbit )	
ISOBUTYL ACETATE	15400 mg/kg ( Rat )	17400 mg/kg ( Rabbit )	
ISOAMYL ALCOHOL	1300 mg/kg ( Rat )	3970 µL/kg ( Rabbit )	
PHENYL ETHYL ALC	1790 mg/kg ( Rat )	790 µL/kg ( Rabbit )	1.38 mg/L ( Rat ) 4 h
ISO AMYL BUTYRATE	5 g/kg ( Rat )	5 g/kg ( Rabbit )	
BENZYL ACETATE	2490 mg/kg ( Rat )	5000 mg/kg ( Rabbit ) 5 g/kg ( Rabbit )	
ACETOPHENONE	= 900 mg/kg ( Rat ) = 815 mg/kg ( Rat )	= 1760 mg/kg ( Rabbit )	

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

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

**Ecotoxicity** Harmful to aquatic life

28.6% 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
PROPYLENE GLYCOL	19000: 96 h Pseudokirchneriella	51600: 96 h Oncorhynchus mykiss	10000: 24 h Daphnia magna mg/L



	subcapitata mg/L EC50	mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	EC50 1000: 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
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
BENZALDEHYDE	-	10.6 - 11.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 12.69: 96 h Oncorhynchus mykiss mg/L LC50 static 0.8 - 1.44: 96 h Lepomis macrochirus mg/L LC50 flow-through 6.8 - 8.53: 96 h Pimephales promelas mg/L LC50 flow-through 7.5: 96 h Lepomis macrochirus mg/L LC50 static	50: 24 h Daphnia magna mg/L EC50
ISOBUTYL ACETATE	-	101: 48 h Leuciscus idus melanotus mg/L LC50 static 101 - 123: 48 h Leuciscus idus melanotus mg/L LC50 flow-through	168: 24 h Daphnia magna mg/L EC50
ISOAMYL ALCOHOL	493: 72 h Desmodemus subspicatus mg/L EC50 181: 96 h Desmodemus subspicatus mg/L EC50	700: 96 h Salmo gairdneri mg/L LC50 static	260: 48 h Daphnia magna mg/L EC50
ACETOPHENONE	-	162: 96 h Pimephales promelas mg/L LC50 flow-through 155: 96 h Pimephales promelas mg/L LC50 static	-

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

Chemical Name	log Pow
GLYCERINE	-1.76
ETHYL ALCOHOL	-0.32
BENZALDEHYDE	1.48
ISOBUTYL ACETATE	1.72
ISOAMYL ALCOHOL	1.28
BENZYL ACETATE	1.96
ACETOPHENONE	1.73

**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.

**Section 14: TRANSPORT INFORMATION****IMDG / IMO**

**14.1 UN/ID No** 1197  
**14.2 Proper shipping name** EXTRACTS, FLAVOURING, LIQUID  
**14.3 Hazard class** 3  
**14.4 Packing Group** III

**DOT/ADR/RID**

**14.1 UN/ID No** 1197  
**14.2 Proper shipping name** EXTRACTS, FLAVOURING, LIQUID  
**14.3 Hazard class** 3  
**14.4 Packing Group** III

**ICAO/IATA**

**14.1 UN/ID No** 1197  
**14.2 Proper shipping name** EXTRACTS, FLAVOURING, LIQUID  
**14.3 Hazard class** 3  
**14.4 Packing Group** III  
**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**

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

**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**

R10 - Flammable

**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed  
H401 - Toxic to aquatic life  
H319 - Causes serious eye irritation  
H227 - Combustible liquid  
H332 - Harmful if inhaled  
H316 - Causes mild skin irritation  
H402 - Harmful to aquatic life  
H225 - Highly flammable liquid and vapor  
H226 - Flammable liquid and vapor  
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** 07-Apr-2017

**Reason for revision:** Not applicable.

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