

SAFETY DATA SHEET

In accordance with the requirements of US 29 CFR Parts 1910, 1915, and 1926.

Givaudan

NATURAL BLACKBERRY FLAVOR WONF

Version 3.2

Revision Date 08 JUN 2018

Print Date 08 JUN 2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Sales No. : 645097
NATURAL BLACKBERRY FLAVOR WONF

Relevant identified uses of the substance or mixture and uses advised against : Flavouring for foodstuffs. Not for retail sale

Intended Use Flavours

Company :
Givaudan Flavors Corp.
1199 Edison Drive
CINCINNATI OH 45216
UNITED STATES OF AMERICA

Emergency telephone number : +12152070061
+18669280789

Please refer to section 16 for a full list of emergency phone numbers.

SECTION 2. HAZARDS IDENTIFICATION

Classification according to HCS 2012 (29 CFR Parts 1910, 1915, and 1926)

Flammable liquids, Category 4
Skin sensitisation, Category 1

H227: Combustible liquid.
H317: May cause an allergic skin reaction.

Label elements

Labelling (REGULATION 29 CFR Parts 1910, 1915, and 1926).

Hazard pictograms :



Signal word : Warning

Hazard statements : H227 Combustible liquid.
H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Administrative information:

Report Information: SDS_US/EN/GHS_SDS_NA_REGION/10

Sales & Distribution Information: ED01/FL/US10

Shipping Order Information: 16,139,601/8,383,090

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P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ eye protection/ face protection.
Response:	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:	
P403 + P235	Store in a well-ventilated place. Keep cool.
Disposal:	
P501	Dispose of contents/ container to an approved waste disposal plant.

Hazards not Otherwise Classified. : None

Please note: Mixtures have not been tested for health hazards. The health hazard information presented is provided in accordance with US 29 CFR 1910.1200 and is based on the testing of individual components which have been shown to cause or may cause these health effects when tested at higher concentrations or at full strength.

Ingredients with unknown acute toxicity.:

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: **0 %**

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Component	CAS-No.	Concentration [%]
propane-1,2-diol	57-55-6	70.00 - 90.00
1,2,3-Propanetriol (= Glycerol)	56-81-5	10.00 - 20.00
4-hydroxy-2,5-dimethyl-3(2H)-furanone (= furonol)	3658-77-3	0.10 - 1.00

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

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SECTION 4. FIRST AID MEASURES

First aid measures

Description of first aid measures

- | | |
|-------------------------|--|
| General advice | : Consult physician or Poison Control Center. The National Hotline for US Poison Control Centers is 1.800.222.1222; www.1-800-222-1222.info/poisonHelp.asp |
| If inhaled | : Get to fresh air immediately.
Consult Poison Control Center or physician if any symptoms develop. |
| In case of skin contact | : Rinse immediately with plenty of water for at least 15 minutes. If skin irritation occurs, seek medical advice/attention.
Remove contaminated clothing and shoes.
Immediately seek medical attention if chemical entered ear canal.
When symptoms persist or in all cases of doubt seek medical advice. |
| In case of eye contact | : Remove contact lenses.
Immediately flush eyes for at least 15 minutes. Get medical attention. |
| If swallowed | : Do NOT induce vomiting.
Immediately consult Poison Control Center or physician. |

Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

- | | |
|------------------------------|--|
| Suitable extinguishing media | : Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂) |
|------------------------------|--|

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Dry chemical

Unsuitable extinguishing media : High volume water jet

Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Evacuate personnel to safe areas.
In the case of vapour formation use a respirator with an approved filter.
Use personal protective equipment as required.
For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Material can create slippery conditions.

Environmental precautions

Retain and dispose of contaminated wash water.
The product should not be allowed to enter drains, water courses or the soil.
Dispose of in accordance with local regulations.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

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SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling : When using do not eat, drink or smoke.
Avoid contact with skin and eyes.
Open drum carefully as content may be under pressure.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Further information on storage conditions : Refrigerated 2-10°C (35-50°F)
Preferably full, hermetically sealed
Advice on common storage : no data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Components	CAS-No. :	Type:	Value :	Basis :	Revision:
propane-1,2-diol	57-55-6	TWA	10 mg/m3	US WEEL	2008-01-01
1,2,3-Propanetriol (= Glycerol)	56-81-5	TWA	5 mg/m3	OSHA Z-1	2011-07-01
1,2,3-Propanetriol (= Glycerol)	56-81-5	TWA	15 mg/m3	OSHA Z-1	2011-07-01
1,2,3-Propanetriol (= Glycerol)	56-81-5	PEL	10 mg/m3	CAL PEL	2014-11-26
1,2,3-Propanetriol (= Glycerol)	56-81-5	PEL	5 mg/m3	CAL PEL	2014-11-26
	(n): The concentration and percentage of the particulate used for this limit are determined from the fraction passing a size selector with the following characteristics: Aerodynamic Diameter in Micrometers (unit density sphere)..... Percent Passing Selector 0 100 1				

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	97 2	91 3	74 4	30 6	17 7	5 10	1
1,2,3-Propanetriol (= Glycerol)	56-81-5	TWA	10 mg/m3	OSHA P0	1989-01-19		
1,2,3-Propanetriol (= Glycerol)	56-81-5	TWA	5 mg/m3	OSHA P0	1989-01-19		
1,2,3-Propanetriol (= Glycerol)	56-81-5			NIOSH REL	2013-10-08		
	See Appendix D - Substances with No Established RELs						

Exposure Assessment: Exposures are dependent on the product being handled, the potential for chemical release, and any resulting airborne concentrations or dermal contact. Since product handling and release scenarios vary, and no two workplaces are exactly alike, it is recommended that the potential for exposure be assessed prior to the product's use or introduction. Exposure assessments should be performed by an occupational hygienist, industrial hygienist, or other qualified occupational or environmental health professional. An exposure assessment should be conducted to determine the efficacy of any ventilation and the need for additional respiratory protection.

Engineering measures

Ventilation: Use engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposures limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

- Protective measures** : Choose PPE based on a hazard assessment, taking into account to the concentration and amount of dangerous substances, and to the specific work-place conditions.
- Eye protection** : Ensure that eyewash stations and safety showers are close to the workstation location.
Chemical resistant goggles must be worn.
- Hand protection** : Wear chemical resistant gloves suitable for this material as determined by a hazard assessment.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin and body protection** : Wear protective clothing suitable for this material as determined by a hazard assessment.
- Respiratory protection** : Respiratory protection should be worn when workplace

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exposures exceed exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, use an approved respirator where there is a potential for adverse effects, including but not limited to respiratory irritation or odor, where indicated or required by the exposure assessment. Selection of air-purifying or positive-pressure supplied air will depend on the results of the exposure assessment which includes an evaluation of the specific operations and the actual or potential airborne concentrations. The type of cartridge or filter to be used must be selected and approved for the chemical, class, or classes of chemical(s) likely to be encountered in the workplace. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash hands before breaks and immediately after handling the product.

See Section 16 for further information.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Form	: liquid
Color	: colorless to Pale yellow
Taste	: Berry, Fruity
Odor	: not determined
Odour Threshold	: Not applicable
Flash point	: 187 °F (86 °C) Method: Tag closed cup
Lower explosion limit	: not determined
Upper explosion limit	: not determined
Flammability (solid, gas)	: Not applicable
Auto-ignition temperature	: not determined
Decomposition temperature	: no data available
pH	: not determined
Melting point	: not determined
Boiling point	: not determined
Vapor pressure	: 0.1816 hPa at 68 °F (20 °C) Calculated (80.5 %)
Density	: 1,065.07 kg/m3 at 68 °F (20 °C)
Bulk density	: Not applicable
Solubility/qualitative	: soluble
Partition coefficient: n-	: Not applicable

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octanol/water
Viscosity, kinematic : no data available
Relative vapour density : no data available
Evaporation rate : no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Heat, flames and sparks.
Extremes of temperature and direct sunlight.

Materials to avoid : no data available

Hazardous decomposition products : no data available

Chemical stability : The product is chemically stable.

Reactivity : none

Hazardous reactions : no data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity : No data is available on the product itself.

Acute inhalation toxicity : No data is available on the product itself.

Acute dermal toxicity : No data is available on the product itself.

Acute toxicity (other routes of administration) : No data is available on the product itself.

Skin corrosion/irritation : May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation : No data is available on the product itself.

Respiratory or skin sensitisation : Causes sensitisation.

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Mutagenicity : No data is available on the product itself.

Reproductive toxicity : No data is available on the product itself.

Teratogenicity : No data is available on the product itself.

Carcinogenicity:

IARC : Remarks : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA : Remarks : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP : Remarks : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

STOT - single exposure : No data is available on the product itself.

STOT - repeated exposure : No data is available on the product itself.

Aspiration hazard : No data is available on the product itself.

Further information : no data available

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SECTION 12. Ecological information

Ecological information is not reported.

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SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.
The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

49 CFR	:	NA 1993
IMDG	:	N/A
IATA	:	N/A

14.2 UN proper shipping name

49 CFR	:	Combustible liquid, n.o.s. (acetaldehyde)
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

49 CFR	:	CBL
IMDG	:	N/A
IATA	:	N/A

14.4 Packing group

49 CFR	:	III
IMDG	:	N/A
IATA	:	N/A

14.5 Environmental hazards

49 CFR		
Marine pollutant	:	no
IMDG	:	Not regulated as a dangerous good

14.6 Special precautions for user

49 CFR		
Emergency Response	:	128
Guidebook Number		

49CFR: no dangerous good in non-bulk packaging

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49CFR:Non-Bulk Packaging (<119 Gallons for liquids and <882 Lbs. Solids).

Remarks : Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

IMDG

IMDG Code Segregation : None
Group

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

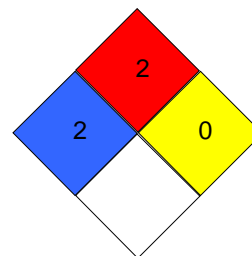
Only relevant information is reported

SARA 311/312 Hazards. : Fire Hazard Acute Health Hazard

SECTION 16. OTHER INFORMATION

NFPA Classification

: Health hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0



Full list of Emergency response numbers worldwide.

	Country	Phone nr		Country	Phone nr
Europe	All Europe	+44 1235 239670	APAC	All East/South East Asia	+65 3158 1074
	France	+33 1 72 11 00 03		Sri Lanka	+65 3158 1195
	Germany	+49 69 222 25285		Taiwan	+886 2 8793 3212
	Spain	+34 91 114 2520		Japan	+81 3 4578 9341
	Italy	+39 02 3604 2884		Indonesia	007 803 011 0293
	Netherlands	+31 10 713 8195		Malaysia	+60 3 6207 4347

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	Turkey	+90 212 375 5231		Thailand	001 800 120 666 751
	Norway	+47 2103 4452		India	+65 3158 1198 000 800 100 7479
	Greece	+30 21 1198 3182		Pakistan	+65 3158 1329
	Portugal	+351 30880 4750		Bangladesh	+65 3158 1200
	Denmark	+45 8988 2286		Philippines	+65 3158 1203
	Sweden	+46 8 566 42573		Vietnam	+84 28 4458 2388
	Poland	+48 22 307 3690		Korea	+65 3158 1285
	Czech republic	+420 228 882 830		South Korea	+82 2 3479 8401
	Finland	+358 9 7479 0199		Australia	+61 2 8014 4558
Middle East/Africa	All Middle East/Africa	+44 1235 239671		New Zealand	+64 9 929 1483
	Bahrain and Middle East	+973 1619 8321		China	+86 532 8388 9090
	Africa/South Africa	+27 21 300 2732		Mexico	+52 55 5004 8763
NOAM	USA and Canada	+1 866 928 0789	LATAM	Brazil	+55 11 3197 5891
	USA and Canada	+1 215 207 0061		Chile	+56 2 2582 9336
	USA and Canada	+1 202 464 2554	Global	Global	+44 1865 407333

Givaudan recommends that each recipient or user of this SDS carefully study this document and consult with the appropriate expert (i.e., industrial hygienist, toxicologist, or occupational physician) to understand and appreciate the technical data, any associated hazards, and appropriate control measures needed to ensure the safe handling and use of this product. The above information relates only to this product and not to its use in combination with any other material or in any particular process. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers and technical groups and is considered to be accurate to the best of Givaudan's knowledge as of the date of this document. Since the conditions of handling and use are not within the knowledge of Givaudan, it is the responsibility of the recipient to conduct an appropriate hazard assessment and to review all information about this product and determine its safety and suitability in their own processes and operations.

Appropriate warnings and safe handling instructions should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use.

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