

Flavor West Manufacturing, LLC.

Version No: **1.1** Safety Data Sheet accord**tog** OSHA HazCom Standard (2012) requirements Chemwatch Hazard Alert Code: 3

Issue Date: **12/10/2020** Print Date: **12/10/2020** L.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	FW-LMP N&A Lemon Meringue Pie Flavor
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Flavor West Manufacturing, LLC.
Address	29400 Hunco Way, Lake Elsinore CA 92530 United States
Telephone	(951) 893-5120
Fax	(714) 276-1621
Website	www.FlavorWest.com
Email	Flavor@FlavorWest.com

Emergency phone number

Association / Organisation	Chemwatch	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	see below	+61 2 9186 1132
Other emergency telephone numbers	see below	+1 855-237-5573

Once connected and if the message is not in your prefered language then please dial 01

Una vez conectado y si el mensaje no está en su idioma preferido, por favor marque 02

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Skin

	Corrosion/Irritation Category 2, Skin Sensitizer Category 1
Label elements	
Hazard pictogram(s)	
Signal word	Warning

Hazard statement(s)

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101 If medical advice is needed, have product container or label at hand.	
P102	Keep out of reach of children.
P103	Read label before use.

Precautionary statement(s) Prevention

P271 Use only outdoors or in a well-ventilated area.	
P280 Wear protective gloves/protective clothing/eye protection/face protection.	
P261 Avoid breathing mist/vapours/spray.	
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P321	Specific treatment (see advice on this label).	
P362	Take off contaminated clothing and wash before reuse.	
P302+P352	F ON SKIN: Wash with plenty of water.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P312	Call a POISON CENTER or doctor/physician if you feel unwell.	
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.		

Precautionary statement(s) Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

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FW-LMP N&A Lemon Meringue Pie Flavor

CAS No	%[weight]	Name
57-55-6	30-40	propylene glycol
64-17-5	10-20	ethanol
56-81-5	40-50	glycerol

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

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- Polyethylene glycols are generally poorly absorbed orally and are mostly unchanged by the kidney.
- Dermal absorption can occur across damaged skin (e.g. through burns) leading to increased osmolality, anion gap metabolic acidosis, elevated calcium, low ionised calcium, CNS depression and renal failure.
- Treatment consists of supportive care.

[Ellenhorn and Barceloux: Medical Toxicology]

Propylene glycol is primarily a CNS depressant in large doses and may cause hypoglycaemia, lactic acidosis and seizures.

- The usual measures are supportive care and decontamination (Ipecac/ lavage/ activated charcoal/ cathartics), within 2 hours of exposure should suffice.
- Check the anion gap, arterial pH, renal function and glucose levels.

Ellenhorn and Barceloux: Medical Toxicology

SECTION 5 Fire-fighting measures

Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	 WARNING: In use may form flammable/ explosive vapour-air mixtures. Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) acrolein other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Slippery when spilt. Remove all ignitio Clean up all spills Avoid breathing v Control personal	immediately. apours and co			-		nt.	
	Chemical Class: alco For release onto land	0,		sorbents	listed in or	der of priority.		
	SORBENT TYPE RANK	APPLICATIO	N	COLLE	CTION L	IMITATIONS		
	LAND SPILL - SMAL	L						
	cross-linked polyme	- particulate	1	shovel	shovel	R, W, SS		
	cross-linked polyme	- pillow	1	throw	pitchfork	R, DGC, RT		
	sorbent clay - partice	ılate	2	shovel	shovel	R,I, P		
	wood fiber - pillow		3	throw	pitchfork	R, P, DGC, RT		
	treated wood fiber -	volliow	3	throw	pitchfork	DGC, RT		
	foamed glass - pillov	/	4	throw	pichfork	R, P, DGC, RT		
Major Spills	LAND SPILL - MEDIUM							
	cross-linked polyme	- particulate	1	blower	skiploade	R,W, SS		
	polypropylene - par	iculate	2	blower	skiploade	W, SS, DGC		
	sorbent clay - partic	ılate	2	blower	skiploade	R, I, W, P, DGC		
	polypropylene - mat		3	throw	skiploade	DGC, RT		
	expanded mineral -	oarticulate	3	blower	skiploade	R, I, W, P, DGC		
	polyurethane - mat		4	throw	skiploade	DGC, RT		
	Legend DGC: Not effective w R; Not reusable I: Not incinerable P: Effectiveness redu RT:Not effective when SS: Not for use within W: Effectiveness redu	ced when rain e terrain is rug environmenta	/ geo	d				
			.,					

Reference: Sorbents for Liquid Hazardous Substance Cleanup and Control;	
R.W Melvold et al: Pollution Technology Review No. 150: Noyes Data Corpor	ration 1988
Slippery when spilt.	
Moderate hazard.	
Clear area of personnel and move upwind.	
Alert Fire Brigade and tell them location and nature of hazard.	
Wear breathing apparatus plus protective gloves.	

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT allow clothing wet with material to stay in contact with skin
Other information	Consider storage under inert gas. Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	 Glycerol: reacts violently with strong oxidisers, acetic anhydride, alkali metal hydrides, calcium hypochlorite, calcium oxychloride, chlorine, chromic anhydride, chromium oxides, ethylene oxide, hydrogen peroxide, phosphorous triiodide, potassium chlorate, potassium permanganate, potassium peroxide, silver perchlorate, sodium hydride, sodium peroxide, sodium tetrahydroborate, is incompatible with strong acids, caustics, aliphatic amines, isocyanates, uranium fluoride is able to polymerise above 145 C Glycols and their ethers undergo violent decomposition in contact with 70% perchloric acid. This seems likely to involve formation of the glycol perchlorate esters (after scission of ethers) which are explosive, those of ethylene glycol and 3-chloro-1,2-propanediol being more powerful than glyceryl nitrate, and the former so sensitive that it explodes on addition of water. Alcohols are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium should not be heated above 49 deg. C. when in contact with aluminium equipment

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	ethanol	Alcohol, Cologne spirit, Ethanol, EtOH, Grain alcohol	1000 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethanol	Ethyl alcohol (Ethanol)	1000 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	ethanol	Ethanol	Not Available	1000 ppm	Not Available	URT irr
US NIOSH Recommended Exposure Limits (RELs)	glycerol	Glycerin (anhydrous); Glycerol; Glycyl alcohol; 1,2,3-Propanetriol; Trihydroxypropane	Not Available	Not Available	Not Available	See Appendix D

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	glycerol	Glycerin (mist): Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	glycerol	Glycerin (mist): Total dust	15 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	Material name	TEEL	-1	TEEL-2	TEEL-3
propylene glycol	Polypropylene glycols	30 mg	g/m3	330 mg/m3	2,000 mg/m3
propylene glycol	Propylene glycol; (1,2-Propanediol)	30 mg	g/m3	1,300 mg/m3	7,900 mg/m3
ethanol	Ethanol: (Ethyl alcohol)	Ethanol: (Ethyl alcohol) Not Availab		Not Available	15000* ppm
glycerol	Glycerine (mist); (Glycerol; Glycerin)	Glycerine (mist); (Glycerol; Glycerin) 45 mg/		180 mg/m3	1,100 mg/m3
Ingredient	Original IDLH		Revised IDLH		
propylene glycol	Not Available		Not Available		
ethanol	3,300 ppm		Not Available		

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
propylene glycol	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemica potency and the adverse health outcomes associated with exposu band (OEB), which corresponds to a range of exposure concentra	ire. The output of this process is an occupational exposure

Not Available

MATERIAL DATA

For ethanol:

glycerol

Odour Threshold Value: 49-716 ppm (detection), 101 ppm (recognition)

Not Available

Eye and respiratory tract irritation do not appear to occur at exposure levels of less than 5000 ppm and the TLV-TWA is thought to provide an adequate margin of safety against such effects. Experiments in man show that inhalation of 1000 ppm caused slight symptoms of poisoning and 5000 ppm caused strong stupor and morbid sleepiness. Subjects exposed to 5000 ppm to 10000 ppm experienced smarting of the eyes and nose and coughing. Symptoms disappeared within minutes.

for propylene glycol:

Saturated vapour concentration @ 20 deg C.= 65.8 ppm, 204.6 mg/m3; i.e higher concentrations can only occur as aerosols or at higher temperatures. Odour Threshold: Practically odourless.

A small number of individuals show skin irritation or sensitisation from repeated or prolonged exposure to propylene glycol. A workplace environmental exposure limit (WEEL) has been established by AIHA and is thought to be protective against systemic effects.

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber

	 NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following sebstance(s) are taken into account in the *computer-generated* selection:

FW-LMP N&A Lemon Meringue Pie Flavor

Material	CPI
BUTYL	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NITRILE	С
NITRILE+PVC	С
PE/EVAL/PE	С
PVC	С

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis,

factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS	-	A-PAPR-AUS / Class 1
up to 50 x ES	-	A-AUS / Class 1	-
up to 100 x ES	-	A-2	A-PAPR-2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear light yellow		
Physical state	Liquid	Relative density (Water = 1)	1.08
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available

pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	>93	Taste	Lemon meringue pie
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. The most common signs of inhalation overexposure to ethanol, in animals, include ataxia, incoordination and drowsiness for those surviving narcosis. The narcotic dose for rats, after 2 hours of exposure, is 19260 ppm. Exposure to aliphatic alcohols with more than 3 carbons may produce central nervous system effects such as headache, dizziness, drowsiness, muscle weakness, delirium, CNS depression, coma, seizure, and neurobehavioural changes. Symptoms are more acute with higher alcohols. Respiratory tract involvement may produce irritation of the mucosa, respiratory insufficiency, respiratory depression secondary to CNS depression, pulmonary oedema, chemical pneumonitis and bronchitis. Cardiovascular involvement may result in arrhythmias and hypotension. The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence. In the absence of such evidence, care should be taken nevertheless to ensure exposure is kept to a minimum and that suitable control measures be used, in an occupational setting to control vapours, fumes and aerosols. Inhalation hazard is increased at higher temperatures. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the cour	
	Ingestion of ethand	ol may produce nausea, vomiting, gastrointestinal bleeding, abdominal pain and diarrhoea. Systemic effects:
Ingestion	Blood concentration:	Effects:

	1.5-3.0 g/l	Moderate: Slurred speech, confusion, ataxia, emotional lability, perceptual and sensation disturbances possible blackout spells, and incoordination with impaired objective performance in standardised tests. Possible diplopia, flushing, tachycardia, sweating and incontinence. Bradypnoea may occur early and tachypnoea may develop in cases of metabollic acidosis, hypoglycaemia and hypokalaemia.
	Symptoms includer child who ingested Excessive repeater individuals; this ma Very high doses gi that produced by e The toxic effects of nervous system (C Effects on the nerv weakness, giddiner nausea, vomiting a animals acutely po The material has N of the lack of corrol following ingestion, toxic substances a	ene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. d increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month large doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation. d ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible y result in muscular weakness, incoordination and mental confusion. ven during feeding studies to rats and dogs produce central nervous system depression (although one-third of thanol), haemolysis and insignificant kidney changes. glycols (dihydric alcohols), following ingestion are similar to those of alcohol, with depression of the central NS), nausea, vomiting and degenerative changes in liver and kidney. ous system characterise over-exposure to higher aliphatic alcohols. These include headache, muscle ss, ataxia, (loss of muscle coordination), confusion, delirium and coma. Gastrointestinal effects may include nd diarrhoea. In the absence of effective treatment, respiratory arrest is the most common cause of death in soned by the higher alcohols. OT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because porating animal or human evidence. The material may still be damaging to the health of the individual, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or re generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). n of the material may be damaging to the health of the individual.
Skin Contact	The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still p health damage following entry through wounds, lesions or abrasions. A single prolonged exposure is not likely to result in the material being absorbed in harmful amounts. However the r be absorbed in potentially harmful amounts when applied in large quantities to severe burns (second or third degree areas of the body as part of a cream, other topical application or by prolonged contact with clothing accidentally well material. Absorption under such circumstances can elevated serum osmolality and may result in osmotic shock. Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in not apparently in man. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce system harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably pr The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material ei • produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to for such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact derma (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may pr blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular of the such and thickening of the epidermis. At the microscopic level there may be intercellular of the such and thickening of the epidermis. At the microscopic level there may be intercellular o	
Eye	transient injury of t days but healing is Irritation of the eye Evidence exists, or Repeated or prolor	e eye with ethanol may cause immediate stinging and burning with reflex closure of the lid and tearing, ne corneal epithelium and hyperaemia of the conjunctiva. Foreign-body type discomfort may persist for up to 2 usually spontaneous and complete. s may produce a heavy secretion of tears (lachrymation). practical experience predicts, that the material may cause eye irritation in a substantial number of individuals. iged eye contact may cause inflammation (similar to windburn) characterised by a temporary redness of the ictivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	 conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related system problems. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in the developm of heritable genetic damage, generally on the basis of appropriate animal studies, other relevant information Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. There is sufficient evidence to establish a causal relationship between human exposure to the material and impaired fertility Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. 	

Long-term exposure to ethanol may result in progressive liver damage with fibrosis or may exacerbate liver injury caused by other agents.

Repeated ingestion of ethanol by pregnant women may adversely affect the central nervous system of the developing foetus, producing effects collectively described as foetal alcohol syndrome. These include mental and physical retardation, learning disturbances, motor and language deficiency, behavioural disorders and reduced head size.

Consumption of ethanol (in alcoholic beverages) may be linked to the development of Type I hypersensitivities in a small number of individuals.

Propylene glycol is though, by some, to be a sensitising principal following the regular use of topical creams by eczema patients. A study of 866 persons using a formulation containing propylene glycol in a patch test indicated that propylene glycol caused primary irritation in 16% of exposed individuals probably caused by dehydration. Undiluted propylene glycol was tested on 1556 persons in a 24 hour patch test. 12.5% showed reactions which were largely toxic (70%) or allergic in nature (30%).

W-LMP N&A Lemon	ΤΟΧΙΟΙΤΥ	IRRITATION
Meringue Pie Flavor	Not Available	Not Available
	ΤΟΧΙΟΙΤΥ	IRRITATION
propylene glycol	Dermal (rabbit) LD50: 20800 mg/kg ^[2]	Eye (rabbit): 100 mg - mild
	Inhalation (rat) LC50: >44.9 mg/l/4H ^[2]	Eye (rabbit): 500 mg/24h - mild
	Oral (dog) LD50: =20000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (mouse) LD50: =22000 mg/kg ^[2]	Skin(human):104 mg/3d Intermit Mod
	Oral (mouse) LD50: =23900 mg/kg ^[2]	Skin(human):500 mg/7days mild
	Oral (rabbit) LD50: =18000-19000 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]
	Oral (rabbit) LD50: =18500 mg/kg ^[2]	
	Oral (rat) LD50: 20000 mg/kg ^[2]	
	ΤΟΧΙΟΙΤΥ	IRRITATION
	1.40 mg/kg ^[2]	Eye (rabbit): 500 mg SEVERE
	1400 mg/kg ^[2]	Eye (rabbit):100mg/24hr-moderate
	4070 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
	4070 mg/kg ^[2]	Skin (rabbit):20 mg/24hr-moderate
	5100 mg/kg ^[2]	Skin (rabbit):400 mg (open)-mild
	6030 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]
	6030 mg/kg ^[2]	
	6080 mg/kg ^[2]	
ethanol	6080 mg/kg ^[2]	
	9200 mg/kg ^[2]	
	9710 mg/kg ^[2]	
	Inhalation (rat) LC50: 0 mg/l/10h ^[2]	
	Inhalation (rat) LC50: 124.7 mg/l/4H ^[2]	
	Inhalation (rat) LC50: 63926.976 mg/l/4h ^[2]	
	mg/kg ^[2]	
	Oral (rat) LD50: =1501 mg/kg ^[2]	
	Oral (rat) LD50: 7060 mg/kg ^[2]	
	ΤΟΧΙΟΙΤΥ	IRRITATION
	Oral (mouse) LD50: ~23000 mg/kg ^[2]	Not Available
	Oral (mouse) LD50: ~26000 mg/kg ^[2]	
glycerol	Oral (rat) LD50: =12600 mg/kg ^[2]	
	Oral (rat) LD50: >10000 mg/kg ^[2]	
	Oral (rat) LD50: 27200 mg/kg ^[2]	
Legend:		ances - Acute toxicity 2.* Value obtained from manufacturer's

The following information refers to contact allergens as a group and may not be specific to this product.

Meringue Pie Flavor	Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.			
FW-LMP N&A Lemon Meringue Pie Flavor & GLYCEROL	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. For glycerol: Acute toxicity: Glycerol is of a low order of acute oral and dermal toxicity with LD50 values in excess of 4000 mg/kg bw. At very high dose levels, the signs of toxicity include tremor and hyperaemia of the gastro-intestinal -tract. Skin and eye irritation studies indicate that glycerol has low potential to irritate the skin and the eye. The available human and animal data, together with the very widespread potential for exposure and the absence of case reports of sensitisation, indicate that glycerol is not a skin sensitiser. Repeat dose toxicity: Repeated oral exposure to glycerol does not induce adverse effects other than local irritation of the gastro-intestinal tract.			
FW-LMP N&A Lemon Meringue Pie Flavor & PROPYLENE GLYCOL	The acute oral toxicity of propylene glycol is very low, and large quantities are required to cause perceptible health damage in humans. Serious toxicity generally occurs only at plasma concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time. It would be nearly impossible to reach toxic levels by consuming foods or supplements, which contain at most 1 g/kg of PG. Cases of propylene glycol poisoning are usually related to either inappropriate intravenous administration or accidental ingestion of large quantities by children. The potential for long-term oral toxicity is also low.			
PROPYLENE GLYCOL & ETHANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.			
Acute Toxicity	×	Carcinogenicity	×	
Skin Irritation/Corrosion	*	Reproductivity	×	
Serious Eye Damage/Irritation	*	STOT - Single Exposure	*	
Respiratory or Skin sensitisation	*	STOT - Repeated Exposure	×	
Mutagenicity	×	Aspiration Hazard	×	

Legend: X – Data either not available or does not fill the criteria for classification

Data available to make classification

SECTION 12 Ecological information

Toxicity

	Endpoint	Test Duration (hr)		Species		Value	Source
FW-LMP N&A Lemon Meringue Pie Flavor	Not Available	Not Available		Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)		Species		Value	Source
	LC50	96		Fish		710-mg/L	4
propylene glycol	EC50	48		Crustacea		>110mg/L	4
	EC50	96		Algae or other aquatic plants		19000mg/L	2
	NOEC	168		Fish		98-mg/L	4
	Endpoint	Test Duration (hr)	SI	pecies	Value	•	Source
	LC50	96	Fi	sh	42-m	g/L	4
	EC50	48	C	rustacea	2-mg/	۲L	4
ethanol	EC50	96	AI	gae or other aquatic plants	-8.35	8-26.503mg/L	4
	EC10	168	AI	gae or other aquatic plants	1.91-	mg/L	4
	NOEC	2016	Fi	sh	0 000	375-mg/L	4

Continued...

FW-LMP N&A Lemon Meringue Pie Flavor

	Endpoint	Test Duration (hr)	Species	Value	Source
glycerol	LC50	96	Fish	>11mg/L	2
	NOEL	48	Not Available	12ug/cm	4
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

When ethanol is released into the soil it readily and quickly biodegrades but may leach into ground water; most is lost by evaporation. When released into water the material readily evaporates and is biodegradable.

Ethanol does not bioaccumulate to an appreciable extent.

The material is readily degraded by reaction with photochemically produced hydroxy radicals; release into air will result in photodegradation and wet deposition. Propylene glycol is known to exert high levels of biochemical oxygen demand (BOD) during degradation in surface waters. This process can adversely affect aquatic life by consuming oxygen needed by aquatic organisms for survival. Large quantities of dissolved oxygen (DO) in the water column are consumed when microbial populations decompose propylene glycol.

Sufficient dissolved oxygen levels in surface waters are critical for the survival of fish, macro-invertebrates, and other aquatic organisms.

For glycerol log Kow : -2.66- -2.47 BOD 5: 0.617-0.87,31-51% COD : 1.16,82-95% ThOD : 1.217-1.56 Completely biodegradable. Environmental fate:

Based on the relevant physical-chemical properties and the fact that glycerol is readily biodegradable, glycerol will partition primarily to water.

Biodegradability: Glycerol is considered to be readily biodegradable in the aquatic environment. Pre-adapted microorganisms can degrade glycerol rapidly under both aerobic and anaerobic conditions.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
propylene glycol	LOW	LOW
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
glycerol	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
propylene glycol	LOW (BCF = 1)
ethanol	LOW (LogKOW = -0.31)
glycerol	LOW (LogKOW = -1.76)

Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (KOC = 1)
ethanol	HIGH (KOC = 1)
glycerol	HIGH (KOC = 1)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	 Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction
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▶ Reuse
▶ Recycling
 Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
DO NOT allow wash water from cleaning or process equipment to enter drains.
It may be necessary to collect all wash water for treatment before disposal.
In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
Where in doubt contact the responsible authority.
Recycle wherever possible or consult manufacturer for recycling options.
Consult State Land Waste Authority for disposal.
Bury or incinerate residue at an approved site.
Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 Regulatory information

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

propylene glycol is found on the following regulatory lists

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Integrated Risk Information System (IRIS)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

US TSCA Chemical Substance Inventory - Interim List of Active Substances

ethanol is found on the following regulatory lists

US ACGIH Threshold Limit Values (TLV)

- US ACGIH Threshold Limit Values (TLV) Carcinogens
- US AIHA Workplace Environmental Exposure Levels (WEELs)

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

glycerol is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)

Gas under pressure	No	
Explosive	No	
Self-heating	No	
Pyrophoric (Liquid or Solid)	No	
Pyrophoric Gas	No	
Corrosive to metal	No	
Oxidizer (Liquid, Solid or Gas)	No	
Organic Peroxide	No	
Self-reactive	No	
In contact with water emits flammable gas	No	
Combustible Dust	No	
Carcinogenicity	No	
Acute toxicity (any route of exposure)	No	
Reproductive toxicity	No	
Skin Corrosion or Irritation	Yes	
Respiratory or Skin Sensitization		
Serious eye damage or eye irritation		
Specific target organ toxicity (single or repeated exposure)		
Aspiration Hazard		
Germ cell mutagenicity		
Simple Asphyxiant		
Hazards Not Otherwise Classified		

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

None Reported

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (propylene glycol; ethanol; glycerol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 Other information

Revision Date	12/10/2020
Initial Date	12/10/2020

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average PC – STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit_o IDLH: Immediately Dangerous to Life or Health Concentrations OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

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end of SDS