

Flavor West Manufacturing, LLC.

Version No: **1.2.4.7** Safety Data Sheet accord**tog** OSHA HazCom Standard (2012) requirements Chemwatch Hazard Alert Code: 4

Issue Date: 06/18/2021 Print Date: 06/18/2021 L.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	FW-BOO N&A Boom! Flavor
Synonyms	Not Available
Proper shipping name	Extracts, flavoring, liquid
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Use according to manufacturer's directions.
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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)

Classification	Flammable Liquid Category 3, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1
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Label elements

Hazard pictogram(s)	
Signal word	Warning

Hazard statement(s)

H226	Flammable liquid and vapour.	
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

Keep away from heat/sparks/open flames/hot surfaces No smoking.	
Use only outdoors or in a well-ventilated area.	
Wear protective gloves, protective clothing, eye protection and face protection.	
Ground/bond container and receiving equipment.	
Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.	
Use only non-sparking tools.	
Take precautionary measures against static discharge.	
Avoid breathing mist/vapours/spray.	
Wash all exposed external body areas thoroughly after handling.	
Contaminated work clothing should not be allowed out of the workplace.	

Precautionary statement(s) Response

P362	Take off contaminated clothing and wash before reuse.	
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam for extinction.	
P302+P352	IF 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.	
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501 Dispos

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

CAS No	%[weight]	Name
57-55-6	30-40	propylene glycol
56-81-5	20-30	glycerol
102-76-1	1-10	glyceryl triacetate
64-17-5	20-30	ethanol
7732-18-5	1-10	water

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]

For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

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. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	 Liquid and vapour are flammable. Moderate fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Moderate explosion hazard when exposed to heat or flame. Combustion products include: carbon monoxide (CO) carbon dioxide (CO2) acrolein other pyrolysis products typical of burning organic material.

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	 Environmental hazard - contain spillage. Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. 							
Major Spills	Chemical Cla	ass: alcol onto lanc RANK	APPLICATIO	ls ed s			rder of priority. LIMITATIONS	
	cross-linked polymer - particulate cross-linked polymer - pillow			1	shovel throw	shovel pitchfork	R, W, SS	
	sorbent clay - particulate		2	shovel		R,I, P		
	wood fiber - pillow			3	throw	pitchfork	R, P, DGC, RT	

treated wood fiber - pillow	3	throw	pitchfork	DGC, RT	
foamed glass - pillow	4	throw	pichfork	R, P, DGC, RT	
LAND SPILL - MEDIUM					
cross-linked polymer - particulate	1	blower	skiploader	R,W, SS	
polypropylene - particulate	2	blower	skiploader	W, SS, DGC	
sorbent clay - particulate	2	blower	skiploader	R, I, W, P, DGC	
polypropylene - mat	3	throw	skiploader	DGC, RT	
expanded mineral - particulate	3	blower	skiploader	R, I, W, P, DGC	
polyurethane - mat	4	throw	skiploader	DGC, RT	
R; Not reusable I: Not incinerable P: Effectiveness reduced when rain RT:Not effective where terrain is ruc		4			
SS: Not for use within environmenta	•		sites		
W: Effectiveness reduced when win					
Reference: Sorbents for Liquid Haz	arc	lous Sub	stance Clea	anup and Control;	
R.W Melvold et al: Pollution Techno	log	y Review	No. 150: N	loyes Data Corporation 19	
Clear area of personnel and mo					
 Alert Fire Brigade and tell them 			nature of h	nazard.	
May be violently or explosively reactive.					
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	 Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Avoid all personal contact, including inhalation. Wear protective clothing when risk of overexposure 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 in approved flammable liquid storage area. Store away from incompatible materials in a cool, dry, well-ventilated area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container	 Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. Check that containers are clearly labelled and free from leaks. For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) For manufactured product having a viscosity of at least 250 cSt.
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 triiodide, sodium tetrahydroborate, is incompatible with strong acids, caustics, aliphatic amines, isocyanates, uranium fluoride is able to polymerise above 145 C Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates. 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 OSHA Permissible Exposure Limits (PELs) Table Z-1	glycerol	Glycerin (mist)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	glycerol	Glycerin (mist)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	glycerol	Glycerin (mist)	Not Available	Not Available	Not Available	See Appendix D
US OSHA Permissible Exposure Limits (PELs) Table Z-1	ethanol	Ethyl alcohol (Ethanol)	1000 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	ethanol	Ethyl alcohol	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	A3

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
propylene glycol	30 mg/m3	330 mg/m3	2,000 mg/m3
propylene glycol	30 mg/m3	1,300 mg/m3	7,900 mg/m3
glycerol	45 mg/m3	180 mg/m3	1,100 mg/m3
glyceryl triacetate	19 mg/m3	210 mg/m3	1,200 mg/m3
ethanol	Not Available	Not Available	15000* ppm

Ingredient	Original IDLH	Revised IDLH
propylene glycol	Not Available	Not Available
glycerol	Not Available	Not Available
glyceryl triacetate	Not Available	Not Available
ethanol	3,300 ppm	Not Available
water	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
propylene glycol	E	≤ 0.1 ppm	
glyceryl triacetate	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

MATERIAL DATA

For ethanol:

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

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	 Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent] Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely. Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuff

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

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

FW-BOO N&A Boom! Flavor

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

Clear yellow

SECTION 9 Physical and chemical properties

Appearance

Information on basic physical and chemical properties

Relative density (Water = **Physical state** Liquid 1.04 1) Partition coefficient Odour Characteristic Not Available n-octanol / water Auto-ignition temperature Odour threshold Not Available Not Available (°C) Decomposition pH (as supplied) Not Available Not Available temperature Melting point / freezing Not Available Viscosity (cSt) Not Available point (°C) Initial boiling point and Not Available Molecular weight (g/mol) Not Available boiling range (°C) Flash point (°C) 25.8 Taste Fruity popsicle Evaporation rate Not Available **Explosive properties** Not Available Flammability Flammable **Oxidising properties** Not Available Surface Tension (dyn/cm **Upper Explosive Limit (%)** Not Available Not Available or mN/m) Lower Explosive Limit (%) Not Available Not Available Volatile Component (%vol) Vapour pressure (kPa) Not Available Gas group Not Available Solubility in water Miscible pH as a solution (%) Not Available Vapour density (Air = 1) Not Available VOC g/L Not Available

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 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	number of individu removing or neutra mammalian lungs gas exchange, the recruitment and ac Inhalation of vapou reflexes, lack of cc The most commor those surviving na Exposure to alipha dizziness, drowsin are more acute wit respiratory depress involvement may r The material has N of the lack of corre- ensure exposure is fumes and aeroso Inhalation hazard i Inhalation of vapou	or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial hals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first alising the irritant and then repairing the damage. The repair process, which initially evolved to protect from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of a primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the ctivation of many cell types, mainly derived from the vascular system. urs may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of pordination and vertigo. In signs of inhalation overexposure to ethanol, in animals, include ataxia, incoordination and drowsiness for rccosis. The narcotic dose for rats, after 2 hours of exposure, is 19260 ppm. atic alcohols with more than 3 carbons may produce central nervous system effects such as headache, eess, muscle weakness, delirium, CNS depression, coma, seizure, and neurobehavioural changes. Symptoms th higher alcohols. Respiratory tract involvement may produce irritation of the mucosa, respiratory insufficiency, sion secondary to CNS depression, pulmonary oedema, chemical pneumonitis and bronchitis. Cardiovascular result in arrhythmias and hypotension. NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because aborating animal or human evidence. In the absence of such evidence, care should be taken nevertheless to a kept to a minimum and that suitable control measures be used, in an occupational setting to control vapours, ls. is increased at higher temperatures. urs or aerosols (mists, fumes), generated by the material during the course of normal handling, may be ealth of the individual.
Ingestion	Blood concentration: <1.5 g/l 1.5-3.0 g/l Ingestion of propy/ Symptoms include child who ingested Excessive repeate individuals; this may Very high doses g that produced by e The toxic effects of nervous system (C Effects on the nervous weakness, gidding nausea, vomiting a	ol may produce nausea, vomiting, gastrointestinal bleeding, abdominal pain and diarrhoea. Systemic effects: Effects: Mild: Impaired visual acuity, coordination and reaction time, emotional lability 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. ene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. id increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month diarge doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation. et ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible ay result in muscular weakness, incoordination and mental confusion. iven during feeding studies to rats and dogs produce central nervous system depression (although one-third of ethanol), haemolysis and insignificant kidney changes. f glycols (dihydric alcohols), following ingestion are similar to those of alcohol, with depression of the central 2NS), nausea, vomiting and degenerative changes in liver and kidney. vous system characterise over-exposure to higher aliphatic alcohols. These include headache, muscle ess, ataxia, (loss of muscle coordination), confusion, delirium and coma. Gastrointestinal effects may include and diarrhoea. In the absence of effective treatment, respira

	The material has NOT been classified by EC Directives or other of the lack of corroborating animal or human evidence. The mate following ingestion, especially where pre-existing organ (e.g liver toxic substances are generally based on doses producing mortal Accidental ingestion of the material may be damaging to the heat	rial may still be damaging to the health of the individual, kidney) damage is evident. Present definitions of harmful or ity rather than those producing morbidity (disease, ill-health).	
Skin Contact	The material may accentuate any pre-existing dermatitis conditio Skin contact is not thought to have harmful health effects (as class health damage following entry through wounds, lesions or abrasi A single prolonged exposure is not likely to result in the material be absorbed in potentially harmful amounts when applied in large areas of the body as part of a cream, other topical application or material. Absorption under such circumstances can elevated serv Most liquid alcohols appear to act as primary skin irritants in hum not apparently in man. Open cuts, abraded or irritated skin should not be exposed to this Entry into the blood-stream through, for example, cuts, abrasions harmful effects. Examine the skin prior to the use of the material The material produces moderate skin irritation; evidence exists, o	ssified under EC Directives); the material may still produce ons. being absorbed in harmful amounts. However the material may e quantities to severe burns (second or third degree) over large by prolonged contact with clothing accidentally wetted by the um osmolality and may result in osmotic shock. tans. Significant percutaneous absorption occurs in rabbits but as material s, puncture wounds or lesions, may produce systemic injury with and ensure that any external damage is suitably protected. or practical experience predicts, that the material either number of individuals following direct contact, and/or ed to the healthy intact skin of animals (for up to four hours), fter the end of the exposure period. xposure; this may result in a form of contact dermatitis ss (erythema) and swelling (oedema) which may progress to At the microscopic level there may be intercellular oedema of	
Eye	Direct contact of the eye with ethanol may cause immediate stinging and burning with reflex closure of the lid and tearing, transient injury of the corneal epithelium and hyperaemia of the conjunctiva. Foreign-body type discomfort may persist for up to 2 days but healing is usually spontaneous and complete. Irritation of the eyes may produce a heavy secretion of tears (lachrymation). Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or prolonged exposure to irritants may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.		
Chronic	Long-term exposure to respiratory irritants may result in disease problems. Practical experience shows that skin contact with the material is substantial number of individuals, and/or of producing a positive Substances that can cause occupational asthma (also known as specific airway hyper-responsiveness via an immunological, irrita responsive, further exposure to the substance, sometimes even to symptoms can range in severity from a runny nose to asthma. On the basis of epidemiological data, the material is regarded as causal association between human exposure to the material and Toxic: danger of serious damage to health by prolonged exposure Serious damage (clear functional disturbance or morphological c caused by repeated or prolonged exposure. As a rule the materia lesions. Such damage may become apparent following direct app sub-acute (28 day) or chronic (two-year) toxicity tests. Limited evidence suggests that repeated or long-term occupation organs or biochemical systems. Long-term exposure to ethanol may result in progressive liver da other agents. Repeated ingestion of ethanol by pregnant women may adverse producing effects collectively described as foetal alcohol syndrom disturbances, motor and language deficiency, behavioural disord Consumption of ethanol (in alcoholic beverages) may be linked to of individuals. Propylene glycol is though, by some, to be a sensitising principal A study of 866 persons using a formulation containing propylene primary irritation in 16% of exposed individuals probably caused persons in a 24 hour patch test. 12.5% showed reactions which the	capable either of inducing a sensitisation reaction in a response in experimental animals. asthmagens and respiratory sensitisers) can induce a state of int or other mechanism. Once the airways have become hyper- to tiny quantities, may cause respiratory symptoms. These carcinogenic to humans. There is sufficient data to establish a the development of cancer. e through inhalation, in contact with skin and if swallowed. hange which may have toxicological significance) is likely to be al produces, or contains a substance which produces severe blication in subchronic (90 day) toxicity studies or following mage with fibrosis or may exacerbate liver injury caused by ly affect the central nervous system of the developing foetus, ne. These include mental and physical retardation, learning ers and reduced head size. to the development of Type I hypersensitivities in a small number following the regular use of topical creams by eczema patients. glycol in a patch test indicated that propylene glycol caused by dehydration. Undiluted propylene glycol was tested on 1556	
FW-BOO N&A Boom! Flavor	TOXICITY Not Available	IRRITATION Not Available	

	ΤΟΧΙΟΙΤΥ	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 100 mg - mild
propylene glycol	Inhalation(Rat) LC50; >44.9 mg/L4h ^[2]	Eye (rabbit): 500 mg/24h - mild
	Oral(Rat) LD50; >10400 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin(human):104 mg/3d Intermit Mod
		Skin(human):500 mg/7days mild
		Skin: no adverse effect observed (not irritating) ^[1]
	ΤΟΧΙCΙΤΥ	IRRITATION
glycerol	dermal (guinea pig) LD50: 58500 mg/kg ^[1]	Not Available
	Oral(Rat) LD50; >20<39800 mg/kg ^[1]	
	ΤΟΧΙΟΙΤΥ	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[2]	Not Available
glyceryl triacetate	Inhalation(Rat) LC50; >1.721 mg/l4h ^[1]	
	Oral(Rat) LD50; >2000 mg/kg ^[2]	
	ΤΟΧΙΟΙΤΥ	IRRITATION
	Dermal (rabbit) LD50: 17100 mg/kg ^[1]	Eye (rabbit): 500 mg SEVERE
	Inhalation(Mouse) LC50; 39 mg/L4h ^[2]	Eye (rabbit):100mg/24hr-moderate
ethanol	Oral(Rat) LD50; >7692 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit):20 mg/24hr-moderate
		Skin (rabbit):400 mg (open)-mild
		Skin: no adverse effect observed (not irritating) ^[1]
	ΤΟΧΙΟΙΤΥ	IRRITATION
water	Oral(Rat) LD50; >90000 mg/kg ^[2] Not Available	
Legend:	1. Value obtained from Europe ECHA Registered Sub Unless otherwise specified data extracted from RTEC	stances - Acute toxicity 2.* Value obtained from manufacturer's SDS. S - Register of Toxic Effect of chemical Substances
	The following information refers to contact allergens as Contact allergies guickly manifest themselves as contact	act eczema, more rarely as urticaria or Quincke's oedema. The
FW-BOO N&A Boom! Flavor	pathogenesis of contact eczema involves a cell-media skin reactions, e.g. contact urticaria, involve antibody-	
	pathogenesis of contact eczema involves a cell-media skin reactions, e.g. contact urticaria, involve antibody- simply determined by its sensitisation potential: the dis	mediated immune reactions. The significance of the contact allergen is no stribution of the substance and the opportunities for contact with it are

Repeat dose toxicity: Repeated oral exposure to glycerol does not induce adverse effects other than local irritation of the gastro-intestinal tract.

FW-BOO N&A Boom! 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.

×	Carcinogenicity	Acute Toxicity 🗙
×	Reproductivity	Skin Irritation/Corrosion
~	STOT - Single Exposure	Serious Eye Damage/Irritation
×	STOT - Repeated Exposure	Respiratory or Skin sensitisation
×	Aspiration Hazard	Mutagenicity 🗙

 Data of the available of about the time the data available to make classification

SECTION 12 Ecological information

Toxicity

FW-BOO N&A Boom!	Endpoint	Test Duration (hr)	Species	Value	Source
Flavor	Not Available	Not Available	Not Available	Not Available	Not Availabl
	Endpoint	Test Duration (hr)	Species	Value	Sourc
	NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
	EC50	72h	Algae or other aquatic plants	Algae or other aquatic plants 19300mg/l	
propylene glycol	LC50	96h	Fish	Fish >10000mg/l	
	EC50	48h	Crustacea	>114.4mg/L	4
	EC50	96h	Algae or other aquatic plants	19000mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Sourc
glycerol	EC0(ECx)	24h	Crustacea	>500mg/l	1
	LC50	96h	Fish	885mg/l	2
	Endpoint	Test Duration (hr)	Species Value		Sourc
	EC50	72h	Algae or other aquatic plants	>940mg/l	2
glyceryl triacetate	EC50	48h	Crustacea	380mg/l	1
	LC50	96h	Fish	>100mg/l	2
	EC0(ECx)	48h	Crustacea	65mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Sourc
	EC50(ECx)	96h	Algae or other aquatic plants	<0.001mg/L	4
ethonal	EC50	72h	Algae or other aquatic plants	275mg/l	2
ethanol	LC50	96h	Fish	>100mg/l	2
	EC50	48h	Crustacea	>79mg/L	4
	EC50	96h	Algae or other aquatic plants	<0.001mg/L	
	Endpoint	Test Duration (hr)	Species	Value	Source
water	Not Available	Not Available	Not Available	Not Available	Not Availabl

Vendor Data

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

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
glycerol	LOW	LOW
glyceryl triacetate	LOW	LOW
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
propylene glycol	LOW (BCF = 1)
glycerol	LOW (LogKOW = -1.76)
glyceryl triacetate	LOW (BCF = 1.3)
ethanol	LOW (LogKOW = -0.31)

Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (KOC = 1)
glycerol	HIGH (KOC = 1)
glyceryl triacetate	LOW (KOC = 48.06)
ethanol	HIGH (KOC = 1)

SECTION 13 Disposal considerations

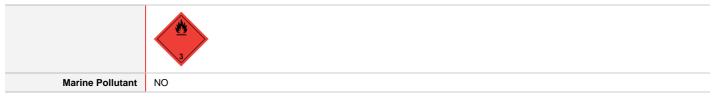
Waste treatment methods

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 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 sever may be subject to local laws and regulations and these should be considered first.
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Recycle wherever possible.
 Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).
 Decontaminate empty containers.

SECTION 14 Transport information

Labels Required



Land transport (DOT)

UN number	1197			
UN proper shipping name	Extracts, flavoring, liquid			
Transport hazard class(es)	Class 3 Subrisk Not Applicable			
Packing group	III			
Environmental hazard	Not Applicable			
Special precautions for user	Classificat Hazard La Special pr Limited qu	abel	Not Applicable Not Applicable 3 B1, IB3, T2, TP1 Not Applicable Not Applicable	

Air transport (ICAO-IATA / DGR)

UN number	1197			
UN proper shipping name	Extracts, flavouring, liquid			
	ICAO/IATA Class	3		
Transport hazard class(es)	ICAO / IATA Subrisk			
	ERG Code	ERG Code 3L		
Packing group				
Environmental hazard	Not Applicable			
	Special provisions	Special provisions A3		
	Cargo Only Packing Ir	nstructions	366	
	Cargo Only Maximum Qty / Pack		220 L	
Special precautions for user	Passenger and Cargo Packing Instructions		355	
user	Passenger and Cargo Maximum Qty / Pack		60 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y344	
	Passenger and Cargo Limited Maximum Qty / Pack		10 L	

Sea transport (IMDG-Code / GGVSee)

UN number	1197
UN proper shipping name	EXTRACTS, FLAVOURING, LIQUID

Transport hazard class(es)	IMDG Class 3	3
	IMDG Subrisk N	Not Applicable
Packing group	Ш	
Environmental hazard	Not Applicable	
Special precautions for user	EMS Number	F-E , S-D
	Special provisions	223 955
	Limited Quantities	5 L

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

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Not Applicable
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Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
propylene glycol	Not Available
glycerol	Not Available
glyceryl triacetate	Not Available
ethanol	Not Available
water	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
propylene glycol	Not Available
glycerol	Not Available
glyceryl triacetate	Not Available
ethanol	Not Available
water	Not Available

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 AIHA Workplace Environmental Exposure Levels (WEELs)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory		
	US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	US Toxicology Excellence for Risk Assessment (TERA) Workplace		
	US DOE Temporary Emergency Exposure Limits (TEELs)	Environmental Exposure Levels (WEEL)		
	US EPA Integrated Risk Information System (IRIS)	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 Toxic Substances Control Act (TSCA) - Chemical Substance Inventory		
	US NIOSH Recommended Exposure Limits (RELs)	US TSCA Chemical Substance Inventory - Interim List of Active Substances		
	US OSHA Permissible Exposure Limits (PELs) Table Z-1			
	glyceryl triacetate is found on the following regulatory lists			
	US DOE Temporary Emergency Exposure Limits (TEELs)	US TSCA Chemical Substance Inventory - Interim List of Active Substances		
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory				
	ethanol is found on the following regulatory lists			
	US ACGIH Threshold Limit Values (TLV)	US OSHA Permissible Exposure Limits (PELs) Table Z-1		
	US ACGIH Threshold Limit Values (TLV) - Carcinogens	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory		
	US DOE Temporary Emergency Exposure Limits (TEELs)	US TSCA Chemical Substance Inventory - Interim List of Active Substances		
	US NIOSH Recommended Exposure Limits (RELs)			
	water is found on the following regulatory lists			
	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances		

Federal Regulations

Yes

FW-BOO N&A Boom! Flavor

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

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	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

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; glycerol; glyceryl triacetate; ethanol; water)	
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 - FBEPH	Yes	

National Inventory	Status	
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	06/18/2021
Initial Date	06/18/2021

SDS Version Summary

Version	Date of Update	Sections Updated
0.2.3.1	05/10/2021	Regulation Change
0.2.4.1	05/24/2021	Regulation Change
0.2.4.2	05/30/2021	Template Change
0.2.4.3	06/04/2021	Template Change
0.2.4.4	06/05/2021	Template Change
0.2.4.5	06/09/2021	Template Change
0.2.4.6	06/11/2021	Template Change
0.2.4.7	06/15/2021	Template Change
0.2.4.7	06/18/2021	Name

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。 IDLH: Immediately Dangerous to Life or Health Concentrations ES: Exposure Standard OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value **BCF: BioConcentration Factors BEI: Biological Exposure Index** AIIC: Australian Inventory of Industrial Chemicals **DSL:** Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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