



## MATERIAL SAFETY DATA SHEET

**NAME: NANFU(EXCELL) ALKALINE BATTERIES**  
**LR20(D);LR14(C);LR6(AA);LR03(AAA);6LR61(9V)**  
**CAS No.: Not applicable**

### 1. IDENTIFICATION

Manganese Dioxide (CAS No.:1313-13-9)	36%-43%
Zinc (CAS No.:7440-66-6)	13%-18%
Potassium Hydroxide (40%) (CAS No.:1310-58-3)	4%-9%
Graphite, natural (CAS No.:7782-42-5)	1%-4%
Zinc Oxide (CAS No.:1314-13-2)	<1

### 2. PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance And Odor: N/R	Boiling Point: N/R	Melting Point: N/R
Vapor Pressure (MM Hg/70 F): N/R	Vapor Density (Air=1): N/R	Specific Gravity: N/R
Decomposition Temperature: UNKNOWN	Evaporation Rate And Ref: N/R	Solubility In Water: N/R
Percent Volatiles By Volume: N/R	Viscosity: N/R	pH: N/R
Corrosion Rate (IPY): UNKNOWN	Autoignition Temperature: N/R	

### 3. REACTIVITY

Stability: YES	Polymerization: Will not occur
Condition to avoid: Avoid electrical shorting	Materials to avoid: Not applicable
Hazardous Decomposition Products: Thermal degradation may produce hazardous fumes of zinc and manganese; Hydrogen gas; caustic vapors of potassium hydroxide and other toxic by-products.	

### 4. HEALTH HAZARD DATA

LD50-LC50 Mixture: LD 50 oral rat is unknown
Route of entry - Inhalation: NO
Route of entry - Skin: YES
Route of entry - Ingestion: NO
Health Haz Acute And Chronic: No health hazard unless battery ruptures. In that event, It may cause burns and irritation.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO

## 5. EXPOSURE CONTROL METHODS

Engineering Controls	General ventilation under normal use conditions.
Eye Protection	None under normal use conditions. Wear safety glasses when handling leaking batteries.
Skin Protection	None under normal use conditions. Use neoprene, rubber or latex gloves when handling leaking batteries.
Respiratory Protection	None under normal use conditions.
Other	Keep batteries away from small children.

## 6. HANDLING AND STORAGE

Store at room temperature. Avoid mechanical or electrical abuse. Do not short or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery label.
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## 7. WASTE DISPOSAL METHODS

Individual consumers may dispose of spent (used) batteries with household trash. Nanfu does not recommend that spent batteries be accumulated (quantities of five gallons or more should be disposed of in a secure landfill), in accordance with appropriate federal, state and local regulations. Do not incinerate, since batteries may explode at excessive temperatures.
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## 8. EMERGENCY PROCEDURES

Steps to be taken if material is released to the environment or spilled in the work area	Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapors. Increase ventilation. Clean-up personnel should wear appropriate protective gear.
Fire and Explosion Hazard	Batteries may burst and release hazardous decomposition products when exposed to a fire situation. See Sec. 3.
Extinguishing Media	As appropriate for surrounding area.
Firefighting Procedures	Use self-contained breathing apparatus and full protective gear.

## 9. FIRST AID AND MEDICAL EMERGENCY PROCEDURES

Eyes	Not anticipated. If battery is leaking and material contacts eyes, flush with copious amounts of clear, tepid water for 30 minutes. Contact physician at once.
Skin	Not anticipated. If battery is leaking, irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irritation, injury or pain persists, consult a physician.
Inhalation	Not anticipated. If battery is leaking, contents may be irritating to respiratory passages. Remove to fresh air. Contact physician if irritation persists.
Ingestion	Not anticipated. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.
Notes to Physician	<ol style="list-style-type: none"><li>1) The primary acutely toxic ingredient is concentrated (40%) potassium hydroxide.</li><li>2) Anticipated potential leakage of potassium hydroxide is 1-3 ml, depending on battery size.</li><li>3) This MSDS does not include or address the small button cell batteries, which can be ingested.</li></ol>

# MATERIAL SAFETY DATA SHEET

In Accordance with Directive 2001/58/CE

Date: 01/01/2011

## 1. Chemical Product

MSDS Name: Alkaline Battery

Manufacturer: **SICHUAN CHANGHONG NEWENERGY TECHNOLOGY CO., LTD.**

Address: No.35, East Mianxing Road, High-Tech Park, 621000, Mianyang, Sichuan, China.

Tel: +86-816-2418674

Fax: +86-816-2410586

## 2. Composition /Information on Ingredients:

Chemical Nature: Chemical power source

CAS-No/EINECS NO.: Not applicable.

INCI CTFA-Description: Alkaline Zinc-Manganese Dry Battery

Tariff No.: "W" 85.06

IMPORTANT NOTE: The battery shall not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

Chemical Name	Molecular Formula	CAS No.	Weight (%)
Zinc	Zn	7440-66-6	17~25
Manganese Dioxide	MnO <sub>2</sub>	1313-13-9	35~43
Graphite	C	7782-42-5	3~4
Potassium hydroxide (liquid)	KOH	1310-58-3	9~12.5
Copper	Cu	7440-50-8	1
Iron	Fe	7439-89-6	15~18
Water	H <sub>2</sub> O	7732-18-5	10~12
Nylon	---	24937-16-4	2~3

\* PNOR: Particulates not otherwise regulated

\*\* PNOC: Particulates not otherwise classified

## 3. Hazards identifications

General: Alkaline battery --- The Common known rules for handing of chemical power source should be obeyed. Do not heat, recharge, disassemble the product or dispose of in fire.

Physical-Chemical Hazards: The chemical materials concluded in the Product is sealed up, thus being stable, safe and eco-friendly under common conditions, may not cause physical-chemical hazards.

Hazards to Human being: Disassemble the product without a professional basis, may cause leakage of the electrolyte and irritation to skin; or cause Hg/ Cd/ Pb (micro trace) poisoning.

Hazards to environment: Dispose the product without separate collection, may lead to pollution caused by Hg/ Cd/ Pb (micro trace), or the electrolyte of alkali solution.

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## 4. First-aid measures

Inhalation: Not applicable.

Skin Contact: Wash with clear water immediately once leakage happens and the inner liquid splashes onto skin.

Eye contact: Rinse eyes immediately with running water for at least ten minutes. Consult an ophthalmologist.

Ingestion: Rinse mouth with water; Give plenty of water to drink. Obtain medical advice.

## 5. Fire-fighting measures

Suitable extinguishing media: Carbon dioxide (CO<sub>2</sub>), foam, dry chemical powder.

Extinguishing media not to be used: Never use a direct water jet, may pollute the water system.

Exposure hazards from combustion products: In case of fire, carbon monoxide or other toxic organic substances may be generated.

Do not inhale fumes and smoke.

Personal protective equipments: Wear full protective clothing. Use self contained breathing apparatus.

**\* Remark: It can be extinguished by car extinguisher as well.**

## 6. Accidental release measures

Personal precautions: Wear protective clothing. Keep unprotected persons away.

Environmental precautions: Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.

Methods for cleaning up: Collect spilled material with an insert standard absorbent like sand or silica. Care for well-Ventilated conditions. Recycle or dispose of the materials in an appropriate way.

## 7. Handling and storage

General: Obey the common known rules and precautions for handling with chemical power sources.

Fire/Explosion protections: Explosion may happen if short-circuit; collect spilled material with an insert standard absorbent like sand or silica.

Storage: Store product in clean, cool and ventilated place with a temperature between 10°C and 30°C (no higher than 40°C in the ordinary course of events) and a relative humidity no higher than 65%; the storage time should not be too long; the batteries should be well-arranged, and do avoid short-circuit caused by the contact of the positive and negative electrodes.

## 8. Exposure controls/Personal protection

Exposition/ Technical measures: Not applicable.

Protection of hands, eyes and skin: To protect hands, eyes and skin, do not disassemble the product without professional basis.

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In Accordance with Directive 2001/58/CE

Date: 01/01/2011

## 9. Physical and chemical properties

Physical state	Solid	Solubility in water	not applicable
Color	not applicable	Vapor pressure	not applicable
Odor	not applicable	Explosion limit	not applicable
pH value	not applicable	Oxidizing properties	not applicable
Specific gravity	not applicable	Flashpoint	not applicable

Refractive index	not applicable	Auto flammability	not applicable
Solubility in ethanol	not applicable	Partition coefficient	not applicable
Melting Point	not applicable	Boiling Point	not applicable
Freezing Point	not applicable		

## 10. Stability and Reactivity

The chemical materials concluded in the Product are sealed up, thus being stable, safe and eco-friendly under common conditions.

## 11. Toxicological information

The product is multi component mixture for which no toxicological data exists.

Precautions avoid disassembling the product without a professional basis.

## 12. Ecological information

In general, no ecological data is available for preparations.

Precautions avoid disposing into drainage systems and into the environment.

## 13. Disposable considerations

Precautions avoid disposing waste products into environment, sewerage, landfills or by incineration.

Obey the rules and precautions for separate collection and recycling of the waste products.

## 14. Transport Information

Road	(ADR/RID)	: not regulated
Air	(ICAO/IATA)	: not regulated
Sea	(IMDG)	: not regulated

\* Remark: Avoid high-temperature, high-humidity condition.

## 15. Regulatory Information

**Symbol:** for transportation, collection, or environment protection (stipulated respectively by each contract).

Contains: transportation marks;

“separate collection” symbol;

“RoHS” symbol (maybe), etc.

# MATERIAL SAFETY DATA SHEET

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Date: 01/01/2011

## 16. Other information

The information on this Material Safety Date Sheet (MSDS) was obtained from current and reputable sources. For any other question, please contact the manufacturer for further information.

# SAFETY DATA SHEET

AIR WICK® Essential Mist - Lavender &amp; Almond Blossom



HEALTH • HYGIENE • HOME

## 1. Product and company identification

**Product name** : AIR WICK® Essential Mist - Lavender & Almond Blossom**Distributed by** : Reckitt Benckiser LLC.  
Morris Corporate Center IV  
399 Interpace Parkway (P.O. Box 225)  
Parsippany, New Jersey 07054-0225  
+1 973 404 2600Reckitt Benckiser (Canada) Inc.  
1680 Tech Avenue, Unit #2  
Mississauga, Ontario L4W 5S9  
CANADA  
Telephone: +1 905 283 7000**Emergency telephone number (Medical)** : 1-800-338-6167**Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC  
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887**Website:** : <http://www.rbnainfo.com>**Product use** : Air care, continuous action (solid and liquid)

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

**SDS #** : D8308258 v3.0**Formulation #:** : 8300059 v1.0**UPC Code / Sizes** : Liquid autospray/battery operated

## 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 4  
EYE IRRITATION - Category 2A

### GHS label elements

**Hazard pictograms** :



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## 2. Hazards identification

<b>Signal word</b>	: CAUTION
<b>Hazard statements</b>	: Combustible liquid. Causes serious eye irritation.
<b><u>Precautionary statements</u></b>	
<b>General</b>	: Keep out of reach of children and pets. If medical advice is needed, have product container or label at hand.
<b>Prevention</b>	: Wash hands thoroughly after handling.
<b>Response</b>	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor.
<b>Storage</b>	: Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: None known.
<b>Hazards not otherwise classified</b>	: None known.

## 3. Composition/information on ingredients

**Substance/mixture** : Mixture

<b>Ingredient name</b>	<b>%</b>	<b>CAS number</b>
Benzyl acetate	1 - 2.5	140-11-4
Linalool	0.1 - 1	78-70-6
Coumarin	0.1 - 1	91-64-5
alpha-Hexylcinnamaldehyde	0.1 - 1	101-86-0
4-tert-Butylcyclohexyl acetate	0.1 - 1	32210-23-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

## 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Inhalation</b>	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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## 4. First aid measures

- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness
- Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide

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## 5. Fire-fighting measures

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

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## 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### Control

#### Occupational exposure limits

Ingredient name	Exposure limits
Benzyl acetate	<b>ACGIH TLV (United States, 4/2014).</b> TWA: 10 ppm 8 hours. TWA: 61 mg/m <sup>3</sup> 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Colorless to light yellow.
<b>Odor</b>	: Characteristic.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Closed cup: 72°C (161.6°F)
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Flow time (ISO 2431)</b>	: Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

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**11. Toxicological information**

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	2490 mg/kg	-
Linalool	LD50 Dermal	Rabbit	5610 mg/kg	-
	LD50 Dermal	Rat	5610 mg/kg	-
	LD50 Oral	Rat	2790 mg/kg	-
Coumarin	LD50 Oral	Rat	293 mg/kg	-
alpha-Hexylcinnamaldehyde	LD50 Oral	Rat	3100 mg/kg	-
4-tert-Butylcyclohexyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3550 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
Linalool	Eyes - Moderate irritant	Rabbit	-	1 hours 0.1 Milliliters	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Moderate irritant	Guinea pig	-	24 hours 100 milligrams	-
alpha-Hexylcinnamaldehyde	Skin - Mild irritant	Human	-	72 hours 32 Percent	-
	Skin - Mild irritant	Man	-	48 hours 16 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
4-tert-Butylcyclohexyl acetate	Skin - Severe irritant	Guinea pig	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
4-tert-Butylcyclohexyl acetate	Skin - Mild irritant	Guinea pig	-	4 hours 3 Percent	-
	Skin - Moderate irritant	Rabbit	-	4 hours 100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-

**Conclusion/Summary**

**Skin** : Based on available data, the classification criteria are not met.

**Eyes** : Based on Calculation method: Causes serious eye irritation.

**Respiratory** : Based on available data, the classification criteria are not met.

**Sensitization**

Not available.

**Conclusion/Summary**

**Skin** : Based on available data, the classification criteria are not met.

**Respiratory** : Based on available data, the classification criteria are not met.

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## 11. Toxicological information

### Mutagenicity

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Carcinogenicity

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Benzyl acetate	-	3	-
Coumarin	-	3	-

### Reproductive toxicity

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Teratogenicity

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Code #** : D8308258 (NA)

**SDS #** : D8308258 v3.0

**Date of issue** : 04/10/2017

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## 11. Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	29699.4 mg/kg

## 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Benzyl acetate	Acute LC50 4000 µg/l Fresh water	Fish - Oryzias latipes - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Linalool	Chronic NOEC 920 µg/l Fresh water Acute EC50 36.7 ppm Fresh water	Fish - Oryzias latipes - Larvae Daphnia - Daphnia magna	28 days 48 hours
Coumarin	Acute LC50 28.8 ppm Fresh water Acute LC50 13500 µg/l Fresh water Acute LC50 56000 µg/l Fresh water	Fish - Oncorhynchus mykiss Daphnia - Daphnia magna Fish - Poecilia reticulata	96 hours 48 hours 96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Linalool	-	62.4 % - Readily - 28 days	-	-

  

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Linalool	-	-	Readily

### Bioaccumulative potential



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## 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Benzyl acetate	1.96	8	low
Linalool	2.84	-	low
Coumarin	1.39	-	low
4-tert-Butylcyclohexyl acetate	4.8	-	high

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	Not Regulated	Not applicable.	Not applicable.	-		-
<b>TDG Classification</b>	Not Regulated	Not applicable.	Not available.	-		-
<b>Mexico Classification</b>	Not Regulated	Not applicable.	Not available.	-		-
<b>IMDG Class</b>	Not Regulated	Not applicable.	Not available.	-		-
<b>IATA-DGR Class</b>	Not Regulated	Not applicable.	Not available.	-		-

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## 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG\* : Packing group

## 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** (2-methoxymethylethoxy)propanol; 3-ethoxy-4-hydroxybenzaldehyde; anisaldehyde; 3-p-cumenyl-2-methylpropionaldehyde; 4-(4-hydroxy-4-methylpentyl) cyclohex-3-enecarbaldehyde; α-hexylcinnamaldehyde; cinnamaldehyde; benzaldehyde; 2-benzylideneheptanal  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** Not determined.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Fire hazard  
 Immediate (acute) health hazard

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Benzyl acetate	1 - 2.5	No.	No.	No.	Yes.	No.
Linalool	0.1 - 1	Yes.	No.	No.	Yes.	No.
Coumarin	0.1 - 1	No.	No.	No.	Yes.	No.
alpha-Hexylcinnamaldehyde	0.1 - 1	No.	No.	No.	Yes.	No.
4-tert-Butylcyclohexyl acetate	0.1 - 1	No.	No.	No.	Yes.	No.

### State regulations

**Massachusetts** : The following components are listed: DIPROPYLENE GLYCOL METHYL ETHER

**New York** : None of the components are listed.

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## 15. Regulatory information

- New Jersey** : The following components are listed: DIPROPYLENE GLYCOL METHYL ETHER; (2-METHOXYMETHYLETHOXY) PROPANOL; BENZYL ACETATE; ACETIC ACID, PHENYLMETHYL ESTER
- Pennsylvania** : The following components are listed: PROPANOL, (2-METHOXYMETHYLETHOXY)-
- Canada**
- WHMIS (Canada)** : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).  
Class D-2B: Material causing other toxic effects (Toxic).
- Canadian lists**
- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.
- Label elements**
- Signal word** : CAUTION
- Hazard statements** : Combustible liquid. CAUSES EYE IRRITATION.
- Precautionary measures** : Keep out of reach of children and pets. Avoid contact with eyes.
- Additional information** : IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. If in eyes, immediately rinse eyes with water. Remove any contact lenses if present and continue rinsing for 15 minutes. If irritation persists, get medical attention. If on skin, rinse well with water.
- Recommendations** : People suffering from perfume sensitivity should be cautious when using this product. Air Fresheners do not replace good hygiene practices.

## 16. Other information

**Hazardous Material Information System (U.S.A.)** :

Health	*	2
Flammability		2
Physical hazards		0
Personal protection		B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)** :



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## 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Key to abbreviations**

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

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**Prepared by** : Reckitt Benckiser India Ltd  
 Plot No 48  
 Sector - 32  
 Institutional Area  
 Gurgaon, Haryana  
 India - 122001

📌 Indicates information that has changed from previously issued version.

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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