



SAFETY DATA SHEET

Holiday Craft Diffuser-Merry and Bright

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1. IDENTIFICATION

A. Product name

- Holiday Craft Diffuser-Merry and Bright

B. Recommended use and restriction on use

- General use : Air freshener_diffuser_Consumer Use only
- Restriction on use : Don't use for other use

C. Manufacturer / Supplier / Distributor information

○ Manufacturer information

- Company name : Herb Family Co., Ltd.
- Address : 1218, C-Dong, H-Business Park 26, Beobwon-Ro 9-Gil, Songpa-gu, Seoul, Korea
- Dept. : Fragrance R&D
- Telephone number : +82-2-6481-9378
- Emergency telephone number :
- Fax number : +82-2-6009-9078
- E-mail address : hf14@herbfamily.com

○ Supplier/Distributer information

- Company name :
- Address :
- Emergency telephone number :

2. HAZARD IDENTIFICATION

A. GHS Classification

- Flammable liquids : Category4
- Germ cell mutagenicity : Category2
- Specific target organ toxicity(Repeated exposure) : Category2
- Acute aquatic toxicity : Category3

B. GHS label elements

○ Hazard symbols



○ Signal words

- Warning

○ Hazard statements

- H227 Flammable liquids
- H341 Suspected of causing genetic defects
- H373 May cause damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- H402 Harmful to aquatic organisms.

○ Precautionary statements

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P260 Do not breathe gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

2) Response

- P308+P313 If exposed or concerned: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

3) Storage

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

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)**○ NFPA grade (0 ~ 4 level)**

- Health : 0, Flammability : 2, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
2,2-Dimethyl-1,3-dioxolane-4-methanol	Isopropylidene glycerol ; Acetone glycerol ; Glycerol dimethylketone ; 2,2-Dimethyl-1,3-dioxolane-4-methanol ; 2,2-Dimethyl-1,3-dioxolan-4-ylmethanol ; (2,2-Dimethyl-1,3-dioxolan-4-yl)methanol ; 1,3-Dioxolane-4-methanol, 2,2-dimethyl- ; Glycerin aceton ketal ; 2,2-Dimethyl-1,3-dioxolane-4-methanol ; DIOXOLAN (1,3)-4-HYDROXYMETHYL-2,2-DIMETHYL- ;	100-79-8	77
fragrance oil (blend)	-	-	14
Water	Dihydrogen oxide ; Oxidane	7732-18-5	5
Ethanol	Alcohol anhydrous ; Alcohol dehydrated ; Ethyl alcohol ; Ethanol solution ; Alcohol ; Fermentation alcohol ; Algrain ; Ethyl hydrate ; Ethyl hydroxide	64-17-5	4

4. FIRST AID MEASURES**A. Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

- Get medical attention immediately.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Keep unauthorized personnel out.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Wash thoroughly after handling.
- Avoid contact with incompatible materials.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not use damaged containers.
- Save applicable laws and regulations.
- Avoid direct sunlight.
- Keep in the original container.
- Collected them in sealed containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o **ACGIH TLV**
 - [Ethanol] : STEL, 1000 ppm (1880 mg/m³)
- o **OSHA PEL**
 - [Ethanol]:1000ppm 1900mg/m³

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Individual protection measures, such as personal protective equipment

- o **Respiratory protection**
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Any chemical cartridge respirator with organic vapor cartridge(s).
 - Any chemical cartridge respirator with a full facepiece and organic vaporcartridge(s).
 - Any air-purifying respirator with a full facepiece and an organic vapor canister.
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- o **Eye protection**
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- o **Hand protection**
 - Wear appropriate chemical resistant glove.
- o **Skin protection**
 - Wear appropriate chemical resistant protective clothing.
- o **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid
- Color	Light Yellow Liquid
B. Odor	Odor
C. Odor threshold	Not available
D. pH	Not available

E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	℃
G. Flash point	68 ℃
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity(Relative density)	0.921
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

(Respiratory tracts)

- Not available

(Oral)

- Not available

(Eye·Skin)

- Not available

B. Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

* Oral - >5000mg/kg

- [2,2-Dimethyl-1,3-dioxolane-4-methanol] : LD50 7000 mg/kg Rat
- [Water] : LD50 > 90000 mg/kg Rat (KOSHA)
- [Ethanol] : LD50 = 6200 mg/kg Rat (HSDB)

* Dermal - ATE MIX : Not available

- Not available

* Inhalation - ATE MIX : >50.0mg/L

- [Ethanol] : LC50 = 59.59 mg/L/4hr Rat (HSDB)

Skin corrosion/irritation

- Not available

Serious eye damage/irritation

- Not available

- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - Not available
- **Carcinogenicity**
 - * **IARC**
 - [Ethanol] : Group 1 (Ethanol in alcoholic beverages)
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - [Ethanol] : A3 (Ethanol in alcoholic beverages)
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Suspected of causing genetic defects
- **Reproductive toxicity**
 - Not available
- **STOT-single exposure**
 - Not available
- **STOT-repeated exposure**
 - May cause damage to organs through prolonged or repeated exposure
- **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [2,2-Dimethyl-1,3-dioxolane-4-methanol] : LC50 733.335 mg/l 96 hr (Estimate)
 - [Ethanol] : LC50 = 42 mg/l 96 hr Oncorhynchus mykiss (ECOTOX)
- **Crustaceans**
 - [2,2-Dimethyl-1,3-dioxolane-4-methanol] : LC50 736.890 mg/l 48 hr (Estimate)
 - [Ethanol] : EC50 = 2 mg/l 48 hr Daphnia magna (ECOTOX)
- **Algae**
 - [2,2-Dimethyl-1,3-dioxolane-4-methanol] : EC50 436.669 mg/l 96 hr (Estimate)

B. Persistence and degradability

- **Persistence**
 - [Water] : log Kow = -1.38
- **Degradability**
 - [Ethanol] : BOD5/COD = 0.57 (IUCLID)

C. Bioaccumulative potential

- **Bioaccumulative potential**
 - Not available
- **Biodegradation**
 - [Ethanol] : Biodegradability = 75 (%) 20 day (Aerobic, Other, Easily decomposed) (IUCLID)

D. Mobility in soil

- [Ethanol] : Koc = 1

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designae waste is mixed, it is difficult to treat seperately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport(IATA): Not subject to IATA regulations.

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- **POPs Management Law**

- Not applicable

- **Information of EU Classification**

- * **Classification**

- [Ethanol] : F; R11

- * **Risk Phrases**

- [Ethanol] : R11

- * **Safety Phrase**

- [Ethanol] : S2, S7, S16

- **U.S. Federal regulations**

- * **OSHA PROCESS SAFETY (29CFR1910.119)**

- Not applicable

- * **CERCLA Section 103 (40CFR302.4)**

- Not applicable

- * **EPCRA Section 302 (40CFR355.30)**

- Not applicable

- * **EPCRA Section 304 (40CFR355.40)**

- Not applicable

- * **EPCRA Section 313 (40CFR372.65)**

- Not applicable

- **Rotterdam Convention listed ingredients**

- Not applicable

- **Stockholm Convention listed ingredients**
 - Not applicable
- **Montreal Protocol listed ingredients**
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE,ESIS, NLM, SIDS, IPCS

B. Issue date

- 2017-07-13

C. Revision number and Last date revised

- 8 times, 2017-08-02

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).