



Material Safety Data Sheet

INTERNATIONAL FLAVORS & FRAGRANCES

Product AGRUMEN ALDEHYDE 0612

Print Date 09/19/2012

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AGRUMEN ALDEHYDE 0612
MSDS Number : 300000328358
Product Use Description : Fragrance Compound

Company : IFF Inc.
600 Highway 36
Hazlet NJ 07730

Telephone : (732) 264-4500
Telefax : (732) 335-2551
Emergency telephone number : +1 800 424 9300

SECTION 2 HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards : Combustible Liquid
Delayed target organ effects
Toxic by ingestion
Skin sensitiser
Moderate skin irritant
Moderate eye irritant
Moderate respiratory irritant
Reproductive hazard

Experience with human exposure

Ingestion : Target Organs: Central nervous system
Symptoms: Central nervous system depression
Remarks: Based on Animal Evidence

Target Organs: Kidney
Symptoms: Kidney disorders

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Remarks: Based on Animal Evidence

Target Organs: Respiratory Tract
Symptoms: Respiratory disorders
Remarks: Based on Animal Evidence

Target Organs: Gastrointestinal tract
Symptoms: Irregularities
Remarks: Based on Animal Evidence

Target Organs: Liver
Symptoms: Liver disorders
Remarks: Based on Animal Evidence

Target Organs: Blood
Symptoms: Blood disorders
Remarks: Based on Animal Evidence

Carcinogenicity:

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

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

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

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Fragrance for consumer product

Fragrance Compound: A multi component mixture of fragrance ingredients. The specific chemical identities of the ingredients not listed herein are considered by IFF to be Trade Secrets and are withheld in accordance with the provisions of 1910.1200 of Title29 of the U.S. Code of Federal Regulations.

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SECTION 4. FIRST AID MEASURES

First aid procedures

- Inhalation : Remove from exposure site to fresh air and keep at rest. Obtain medical advice.
- Skin contact : Remove contaminated clothes. Wash thoroughly with water (and soap). Contact physician if symptoms persist.
- Eye contact : Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.
- Ingestion : Rinse mouth with water and obtain medical advice.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : 156 °F (69 °C)

Fire fighting

Suitable extinguishing media : Use water spray, dry chemical, carbon dioxide or appropriate foam.

Protective equipment and precautions for firefighters

Special protective equipment for fire-fighters : Wear NIOSH approved self-contained breathing apparatus and full protective clothing when fighting fires involving chemicals. Use water spray to cool containers exposed to fire.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.
- Environmental precautions : Keep away from drains, surface- and groundwater and soil.
- Methods for containment /
Methods for cleaning up : Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

SECTION 7. HANDLING AND STORAGE

- Handling : Avoid excessive inhalation of concentrated vapors. Follow good manufacturing practices for housekeeping and personal hygiene. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period. Contaminated clothing and shoes should be thoroughly cleaned before re-use.
- If appropriate, procedures used during the handling of this material should also be used when cleaning equipment or removing residual chemicals from tanks or other containers, especially when steam or hot water is used, as this may increase vapor concentrations in the workplace air. Where chemicals are openly handled, access should be restricted to properly trained employees.
Keep all heated processes at the lowest necessary temperature in order to minimize emissions of volatile chemicals into the air.
- Advice on protection against fire and explosion : Keep away from ignition sources and naked flame.

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Requirements for storage areas and containers : Store in a cool, dry, ventilated area away from heat sources. Keep containers upright and tightly closed when not in use.

Further information on storage conditions : Keep in nitrite free containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	Listed by	Value type	Exposure limit(s)
Cyclohexene, 1-methyl-4-(1-methylethenyl)-	USA. Workplace Environmental Exposure Levels (WEEL)	8-hr TWA	30 ppm
2,6-Octadienal, 3,7-dimethyl-	USA. ACGIH Threshold Limit Values (TLV)	8-hour, time-weighted average	5 ppm

Engineering measures

Engineering measures : Where feasible, isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant. Where feasible, use closed systems to transfer and process this material

Personal protective equipment

Eye protection : Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.

Hand protection : Avoid skin contact. Use chemically resistant gloves.

Respiratory protection : Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures.

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No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient.

If engineering controls and safe work practices are not sufficient, an approved, properly fitted respirator with organic vapor cartridges or canisters and particulate filters should be used:

- a)while engineering controls and appropriate safe work practices and/or procedures are being implemented; or
- b)during short term maintenance procedures when engineering controls are not in normal operation or are not sufficient; or
- c)if normal operational workplace vapor concentration in the air is increased due to heat ;
- d)during emergencies; or
- e)if engineering controls and operational practices are not sufficient to reduce airborne concentrations below an established occupational exposure limit.

Hygiene measures : To the extent deemed appropriate, implement pre-placement and regularly scheduled ascertainment of symptoms and spirometry testing of lung function for workers who are regularly exposed to this material.
To the extent deemed appropriate, use an experienced air sampling expert to identify and measure volatile chemicals that could be present in the workplace air to determine potential exposures and to ensure the continuing effectiveness of engineering controls and operational practices to minimize exposure.

Protective measures : In December 2003, the National Institute for Occupational Safety and Health ("NIOSH") published an Alert on preventing lung disease in workers who use or make flavorings [NIOSH Publication Number 2004-110].
In August 2004, the United States Flavor and Extract Manufacturers Association (FEMA) issued a report entitled "Respiratory Safety in the Flavor Manufacturing Workplace".

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Both of these reports provide recommendations for reducing employee exposure and for medical surveillance in the workplace. The recommendations in these reports are generally applicable to the use of any chemical in the workplace and you are strongly urged to review both of these reports.

The report published by FEMA also contains a list of "high priority" chemicals. If any of these chemicals are present in this product at a concentration $\geq 1.0\%$ due to an intentional addition by IFF, the chemical(s) will be identified in this safety data sheet.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : liquid
Colour : yellow
Odour : conforms to standard

Safety data

Flash point : 156 °F (69 °C)
Vapour pressure : .35 hPa (0.26 mmHg)
Note: Calculated

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Remarks: Direct sources of heat.
Materials to avoid : Remarks: Reaction with nitrosating agents may lead to the formation of carcinogenic nitrosamines.

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Chemical stability : Remarks: Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

Hazardous decomposition products : Note: Carbon monoxide and unidentified organic compounds may be formed during combustion.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological information

Further information : There is no data available for this product. The health hazards are assessed based on the ingredients in this preparation and their concentrations.

SECTION 12. ECOLOGICAL INFORMATION

Ecological information

Additional ecological information : Avoid contamination of soil, ground and surface water.

SECTION 13. DISPOSAL CONSIDERATIONS

Contaminated packaging : Place material into sealed containers and dispose of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Proper shipping name : Combustible liquid, n.o.s. (D-LIMONENE)

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UN number : 1993
Class : CBL
Packing group : III
Emergency Response : 128
Guidebook Number

DOT NON-BULK Not dangerous goods

IATA UN number : 3082
Description of the goods : ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S.
(D-LIMONENE)
Class : 9
Packing group : III
ICAO-Labels : 9

IMDG UN number : 3082
Description of the goods : ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S.
(D-LIMONENE)
Class : 9
Packing group : III
IMDG-Labels : 9
EmSNumber 1 : F-A
EmSNumber 2 : S-F
Marine pollutant : yes
(D-LIMONENE)

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid, Delayed target organ effects, Toxic by ingestion, Skin sensitiser, Moderate skin irritant, Moderate eye irritant, Moderate respiratory irritant, Reproductive hazard

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

HMIS Classification : Health hazard: 2

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Chronic Health Hazard: *
Flammability: 2
Physical and chemical hazards: 0

SECTION 16. OTHER INFORMATION

Further information

The information in this MSDS was obtained from current and reliable sources. However the data is provided without any warrant, expressed or implied, regarding its correctness or accuracy. Since the use, handling, storage and disposal of this product are beyond IFF control, it is the responsibility of the user both to determine safe conditions for the use of this product and to assume liability of loss, damage, or expense arising out of the product's improper use. No warranty expressed or implied regarding the product described herein shall be created by or inferred from any statement or omission in this MSDS. Various Federal, State or Provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in this MSDS. The user should review these regulations to ensure full compliance.

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