

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

1 Identification of substance:**Product details:****Product name:** 3-Furaldehyde**Stock number:** L13141**Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company
 Johnson Matthey Catalog Company, Inc.
 30 Bond Street
 Ward Hill, MA 01835-8099
 Emergency Phone: (978) 521-6300
 CHEMTREC: (800) 424-9300
 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department**Emergency information:**

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:**Chemical characterization:****Description:** (CAS#)

3-Furaldehyde (CAS# 498-60-2): 100%

3 Hazards identification**Hazard description:**

T Toxic

Information pertaining to particular dangers for man and environment

R 10 Flammable.

R 23/25 Toxic by inhalation and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Classification system**HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	3
FIRE	2
REACTIVITY	1

Health (acute effects) = 3

Flammability = 2

Reactivity = 1

GHS label elements**Danger**

3.1/2 - Fatal if swallowed.

3.1/2 - Fatal if inhaled.

3.2/2 - Causes skin irritation.

3.3/2A - Causes serious eye irritation.

3.8/3 - May cause respiratory irritation.

**Warning**

2.6/3 - Flammable liquid and vapour.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/ equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapours/spray.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

Product name: 3-Furaldehyde

(Contd. of page 1)

Wear respiratory protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

Specific treatment is urgent (see label).

Specific treatment (see label).

Rinse mouth.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

In case of fire: Use for extinction: CO2, powder or water spray.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.**5 Fire fighting measures****Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Keep away from ignition sources.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

USA

(Contd. on page 3)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

Product name: 3-Furaldehyde

(Contd. of page 2)

7 Handling and storage

Handling

Information for safe handling:

Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Open and handle container with care.

Information about protection against explosions and fires:

Keep ignition sources away.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.
Store away from air.
Store in the dark.

Further information about storage conditions:

Store under dry inert gas.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from exposure to light.
This product is air sensitive.

8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace: Not required.

Additional information: No data

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves
Check protective gloves prior to each use for their proper condition.

Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

Form:	Liquid
Color:	Yellow Brown
Odor:	Almond-like

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	145°C (293°F)
Sublimation temperature / start:	Not determined

Flash point:	48°C (118°F)
---------------------	--------------

Ignition temperature:	Not determined
------------------------------	----------------

Decomposition temperature:	Not determined
-----------------------------------	----------------

Explosion limits:	
Lower:	Not determined

(Contd. on page 4)

USA

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

Product name: 3-Furaldehyde

(Contd. of page 3)

Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68°F):	1.15 g/cm ³

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Light

Oxidizing agents

Air

Acids

Bases

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:



Hazard class:

6.1

Identification number:

UN1199

Packing group:

II

Proper shipping name (technical name): FURALDEHYDES

Label

6.1+3

(Contd. on page 5)

-USA-

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

Product name: 3-Furaldehyde

(Contd. of page 4)

Land transport ADR/RID (cross-border)

ADR/RID class: 6.1 (TF1) Toxic substances
 Danger code (Kemler): 63
 UN-Number: 1199
 Packaging group: II
 Description of goods: 1199 FURALDEHYDES

Maritime transport IMDG:

IMDG Class: 6.1
 UN Number: 1199
 Label: 6.1+3
 Packaging group: II
 EMS Number: F-E, S-D
 Proper shipping name: FURALDEHYDES

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
 UN/ID Number: 1199
 Label: 6.1+3
 Packaging group: II
 Proper shipping name: FURALDEHYDES

UN "Model Regulation": UN1199, FURALDEHYDES, 6.1 (3), II

15 Regulations**Product related hazard informations:****Hazard symbols:**

T Toxic

Risk phrases:

10 Flammable.
 23/25 Toxic by inhalation and if swallowed.
 36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 36/37 Wear suitable protective clothing and gloves.
 45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

Information about limitation of use: For use only by technically qualified individuals.

16 Other information:

(Contd. on page 6)

USA

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

Product name: 3-Furaldehyde

(Contd. of page 5)

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

- USA -