

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
	:
EC index no	: 605-010-00-4
EC no	: 202-627-7
CAS No	: 98-01-1
Product code	: 03893
Formula	: C5H4O2

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhal.), Category 3	H331
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 4	H312
Carcinogenicity, Category 2	H351
Serious eye damage/eye irritation, Category 2	H319
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335

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Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40

T; R23/25

Xn; R21

Xi; R36/37/38

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06

GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H301+H331 - Toxic if swallowed or if inhaled
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer

Precautionary statements (CLP) :

P261 - Avoid breathing dust, fume, gas, vapours, spray, mist
P280 - Wear protective clothing, protective gloves, eye protection, face protection
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P311 - Call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : FURFURAL AR/ACS

CAS No : 98-01-1

EC no : 202-627-7

EC index no : 605-010-00-4

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Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Suspected of causing cancer.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see ... on this label).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : Protective gloves
Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Colorless to brown.
Odour : almond odor.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : -36 °C
Freezing point : No data available
Boiling point : 162 °C

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Flash point	: 60 °C
Auto-ignition temperature	: 316 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 2.3 hPa at 20 °C
Relative vapour density at 20 °C	: 3.32
Relative density	: No data available
Density	: 1.16 g/cm ³
Solubility	: Water: Soluble
Log Pow	: 0.41
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 2.1 - 19.3 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation: Toxic if inhaled. Oral: Toxic if swallowed. Dermal: Harmful in contact with skin.

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

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Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful in contact with skin. Toxic if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

FURFURAL AR/ACS (98-01-1)	
Log Pow	0.41

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to ...
Ecology - waste materials	: Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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14.1. UN number

UN-No. (ADR)	: 1199
UN-No. (IMDG)	: 1199
UN-No.(IATA)	: 1199
UN-No.(ADN)	: Not regulated
UN-No. (RID)	: Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: FURALDEHYDES
Proper Shipping Name (IMDG)	: FURALDEHYDES
Proper Shipping Name (IATA)	: FURALDEHYDES
Proper Shipping Name (ADN)	: Not regulated
Proper Shipping Name (RID)	: Not regulated
Transport document description (ADR)	: UN 1199 FURALDEHYDES, 6.1 (3), II, (D/E)
Transport document description (IMDG)	: UN 1199 FURALDEHYDES, 6.1 (3), II
Transport document description (IATA)	: UN 1199 FURALDEHYDES, 6.1, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 6.1 (3)
Danger labels (ADR)	: 6.1, 3



IMDG

Transport hazard class(es) (IMDG)	: 6.1 (3)
Danger labels (IMDG)	: 6.1, 3



IATA

Transport hazard class(es) (IATA)	: 6.1 (3)
Hazard labels (IATA)	: 6.1, 3



ADN

Transport hazard class(es) (ADN)	: Not regulated
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RID

Transport hazard class(es) (RID)	: Not regulated
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14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated

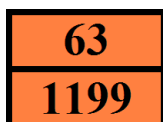
14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: TF1
Limited quantities (ADR)	: 100ml
Excepted quantities (ADR)	: E4
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S2, S9, S19
Hazard identification number (Kemler No.)	: 63
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: •3Y

- Transport by sea

Limited quantities (IMDG)	: 100 ml
Excepted quantities (IMDG)	: E4
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: A
MFAG-No	: 132P

- Air transport

PCA Excepted quantities (IATA)	: E4
PCA Limited quantities (IATA)	: Y641

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PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 654
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 662
CAO max net quantity (IATA)	: 60L
ERG code (IATA)	: 6F

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

FURFURAL AR/ACS is not on the REACH Candidate List

FURFURAL AR/ACS is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to VwVwS, Annex 2; WGK No 113)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

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SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
R21	Harmful in contact with skin
R23/25	Toxic by inhalation and if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R40	Limited evidence of a carcinogenic effect
T	Toxic
Xi	Irritant
Xn	Harmful

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product