

**1. PRODUCT AND COMPANY IDENTIFICATION:**

**PRODUCT CODE** N0253  
**PRODUCT NAME** NATURAL FURFURAL  
**SUPPLIER** Shanghai M & U International Trade Co., Ltd.  
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**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

**2. HAZARD IDENTIFICATION:**

**Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed

Acute Tox. 3 H331 Toxic if inhaled



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer



GHS07

Acute Tox. 4 H312 Harmful in contact with skin

Skin Irrit. 2 H315 Causes skin irritation

Eye Irrit. 2A H319 Causes serious eye irritation

STOT SE 3 H335 May cause respiratory irritation

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



Toxic

Toxic by inhalation and if swallowed



Harmful

Harmful in contact with skin. Limited evidence of a carcinogenic effect



Irritant

Irritating to eyes, respiratory system and skin

Carc. Cat. 3

### **Information concerning particular hazards for human and environment:**

Not applicable

### **Label elements**

#### **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

#### **Hazard pictograms**



GHS02 GHS06 GHS08

#### **Signal word**

Danger

#### **Hazard-determining components of labeling**

2-furaldehyde

#### **Hazard statements**

Flammable liquid and vapor

Toxic if swallowed or if inhaled

Harmful in contact with skin

Causes skin irritation

Causes serious eye irritation

Suspected of causing cancer

May cause respiratory irritation

#### **Precautionary statements**

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

Use explosion-proof electrical/ventilating/lighting/equipment

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

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

Store locked up

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

## Classification system

### NFPA ratings (scale 0 - 4)



Health = 3  
Fire = 2  
Reactivity = 0

### HMIS-ratings (scale 0 - 4)



Health = \*3  
Fire = 2  
Reactivity = 0

### Other hazards

#### Results of PBT and vPvB assessment

##### PBT

Not applicable

##### vPvB

Not applicable

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS:

#### Chemical characterization: Substances

##### CAS No. Description

98-01-1 2-furaldehyde

##### Identification number(s)

##### EC number

202-627-7

##### Index number

605-010-00-4

### 4. FIRST-AID GUIDE:

#### Description of first aid measures

##### General information

Immediately remove any clothing soiled by the product

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least

48 hours after the accident

Remove breathing apparatus only after contaminated clothing have been completely removed

In case of irregular breathing or respiratory arrest provide artificial respiration

##### After inhalation

Supply fresh air or oxygen; call for doctor  
In case of unconsciousness place patient stably in side position for transportation

**After skin contact**

Immediately wash with water and soap and rinse thoroughly

**After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor

**After swallowing**

Do not induce vomiting; immediately call for medical help

**Most important symptoms and effects, both acute and delayed**

No further relevant information available

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available

**5. FIRE-FIGHTING GUIDE:**

**Extinguishing media**

**Suitable extinguishing agents**

CO2 or extinguishing powder. Fight larger fires with alcohol resistant foam

**Special hazards arising from the substance or mixture**

No further relevant information available

**Advice for firefighters**

**Protective equipment**

Mouth respiratory protective device

**Additional information**

Cool endangered receptacles with water spray

Collect contaminated fire fighting water separately. It must not enter the sewage system

**6. ACCIDENTAL RELEASE GUIDE:**

**Personal precautions, protective equipment and emergency procedures**

Not required

**Environmental precautions**

Do not allow to enter sewers/ surface or ground water

**Methods and material for containment and cleaning up**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation

**Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment

See Section 13 for disposal information

**7. HANDLING AND STORAGE:**

**Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace

Open and handle receptacle with care

**Information about protection against explosions and fires**

Keep respiratory protective device available

**Conditions for safe storage, including any incompatibilities**

**Storage**

**Requirements to be met by storerooms and receptacles**

No special requirements

**Information about storage in one common storage facility**

Not required

**Further information about storage conditions**

Keep receptacle tightly sealed

**Specific end use(s)**

No further relevant information available

**8. EXPOSURE AND PERSONAL PROTECTION:**

**Additional information about design of technical systems**

No further data; see item 7.

**Control parameters**

**Components with limit values that require monitoring at the workplace**

**98-01-1 2-furaldehyde**

PEL Long-term value: 20 mg/m<sup>3</sup>, 5 ppm  
Skin

TLV Long-term value: 7.9 mg/m<sup>3</sup>, 2 ppm  
Skin; BEI

**Ingredients with biological limit values**

**98-01-1 2-furaldehyde**

BEI 200 mg/L  
Medium: urine  
Time: end of shift

	Parameter: Furoic acid with hydrolysis (nonspecific)
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**Additional information**

The lists that were valid during the creation were used as a basis

**Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

- Keep away from foodstuffs, beverages and feed
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work
- Store protective clothing separately
- Avoid contact with the eyes and skin

**Breathing equipment**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air

**Protection of hands**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer

**Penetration time of glove material**

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed

**Eye protection**



Tightly sealed goggles

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

<p><b>Information on basic physical and chemical properties</b></p> <p><b>General Information</b></p> <p><b>Appearance</b></p>
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<b>Form</b>	Liquid
<b>Color</b>	Yellow to brown
<b>Odor</b>	Fragrant
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range</b>	-36 °C (-33 °F)
<b>Boiling Point/Boiling range</b>	162 °C (324 °F)
<b>Flash Point</b>	60 °C (140 °F)
<b>Flammability (Solid, gaseous)</b>	Not applicable
<b>Ignition temperature</b>	315 °C (599 °F)
<b>Decomposition temperature</b>	Not determined
<b>Auto Ignition</b>	Not determined
<b>Danger of explosion</b>	Not determined
<b>Explosion limiys</b>	
<b>Lower</b>	2.1 Vol %
<b>Upper</b>	19.3 Vol %
<b>Vapor pressure 20°C (68°F)</b>	1.5 hPa (1mm Hg)
<b>Density at 20°C (68°F)</b>	1.162 g/cm <sup>3</sup> (9.697 lbs/gal)
<b>Relative density</b>	Not determined
<b>Vapor density</b>	Not determined
<b>Evaporation rate</b>	Not determined
<b>Solubility in/Miscibility with</b>	
<b>Water at 20°C (68°F)</b>	83 g/l
<b>Partition coefficient (n-octanol/water)</b>	Not determined
<b>Viscosity</b>	
<b>Dynamic</b>	Not determined
<b>Kinematic</b>	Not determined
<b>Organic solvents</b>	0.0 %

**Other information**

No further relevant information available

**10. STABILITY AND REACTIVITY:**

**Reactivity**

**Chemical stability**

**Thermal decomposition / conditions to be avoided**

No decomposition if used according to specifications

**Possibility of hazardous reactions**

No dangerous reactions known

**Conditions to avoid**

No further relevant information available

**Incompatible materials**

No further relevant information available

**Hazardous decomposition products**

No dangerous decomposition products known

**11. TOXICOLOGICAL INFORMATION:**

**Information on toxicological effects**

**Acute toxicity**

<b>LD/LC50 values that are relevant for classification</b>		
<b>98-01-1 2-furaldehyde</b>		
Oral	LD50	65 mg/kg (rat)

**Primary irritant effect**

**On the skin**

Irritant to skin and mucous membranes

**On the eye**

Irritating effect

**Sensitization**

No sensitizing effects known

**Additional toxicological information**

**Carcinogenic categories**

<b>IARC (International Agency for Research on Cancer)</b>		
98-01-1	2-furaldehyde	3
<b>NTP (National Toxicology Program)</b>		
Substance is not listed		
<b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
Substance is not listed		

**12. ECOLOGICAL INFORMATION:**

**Toxicity**

**Aquatic toxicity**

No further relevant information available

**Persistence and degradability**

No further relevant information available

**Bioaccumulative potential**

No further relevant information available

**Mobility in soil**

No further relevant information available



### **Additional ecological information**

#### **General notes**

Water hazard class 2 (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system  
Danger to drinking water if even small quantities leak into the ground

#### **Results of PBT and vPvB assessment**

##### **PBT**

Not applicable

##### **vPvB**

Not applicable

##### **Other adverse effects**

No further relevant information available

### **13. DISPOSAL RECOMMENDATIONS:**

#### **Waste treatment methods**

##### **Recommendation**

Must not be disposed of together with household garbage  
Do not allow product to reach sewage system

#### **Uncleaned packaging**

##### **Recommendation**

Disposal must be made according to official regulations

### **14. TRANSPORTATION INFORMATION:**



#### **DOT (US)**

UN number: 1199 Class: 6.1(3) Packing group: II  
Proper shipping name: Furaldehydes



#### **IMDG**

UN number: 1199 Class: 6.1(3) Packing group: II  
Proper shipping name: 1199 Furaldehydes



#### **IATA**

UN number: 1199 Class: 6.1(3) Packing group: II

Proper shipping name: FURALDEHYDES

## 15. REGULATORY INFORMATION:

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

**Sara**

**Section 355 (extremely hazardous substances)**

Substance is not listed

**Section 313 (Specific toxic chemical listings)**

Substance is not listed

**TSCA (Toxic Substances Control Act)**

Substance is listed

**Proposition 65**

**Chemicals known to cause cancer**

Substance is not listed

**Chemicals known to cause reproductive toxicity for females**

Substance is not listed

**Chemicals known to cause reproductive toxicity for males**

Substance is not listed

**Chemicals known to cause developmental toxicity**

Substance is not listed

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

Substance is not listed

**TLV (Threshold Limit Value established by ACGIH)**

98-01-1 2-furaldehyde A3

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed

**GHS label elements**

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**Hazard pictograms**



GHS02 GHS06 GHS08

**Signal word**

Danger

**Hazard-determining components of labeling**

2-furaldehyde

**Hazard statements**

Flammable liquid and vapor

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Causes serious eye irritation

Suspected of causing cancer

May cause respiratory irritation

**Precautionary statements**

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Use explosion-proof electrical/ventilating/lighting/equipment

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

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

Store locked up

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

**Chemical safety assessment**

A Chemical Safety Assessment has not been carried out

**16. OTHER INFORMATION:**

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the 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 the MSDS. The user should review these regulations to ensure full compliance.