

## 1. Product and Company Identification

www.rxmarine.com

Product Name RXSOL-60-6604-566  
Product Type ETHYL FORMATE FOR SYNTHESIS  
Revised date

### Company Details:

RX MARINE INTERNATIONAL  
105, A wing , BSEL , TECH PARK.  
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : Mumbai, Kandla, Chennai, Visakhapatnam, Kolkata, Fujairah, Muscat Barka

Phone +91 22 27815541 / 42  
Fax +91 22 2781 1318 :::AOH :0091 9821214367  
Email [mail@rxmarine.com](mailto:mail@rxmarine.com)

## 2. Composition / Information on ingredients

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Substance / Preparation : Ethyl formate

CAS No :109-94-4

Substance.

Substance name Contents CAS No

Ethyl formate : 100 % 109-94-4

Contains no other components or impurities which will influence the classification of the product.

## 3. Hazards Identification

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3.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : F; R11

Xn; R20/22

Xi; R36/37

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract

irritation - Category 3 - Warning (CLP : STOT SE 3) H335

Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302

Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332

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Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319

Physical hazards : Flammable liquids - Category 2 - Danger (CLP : Flam. Liq. 2) H225

### 3.2. Label elements

Labelling EC 67/548 or EC 1999/45

Symbol(s) : F : Highly flammable

Xn : Harmful R Phrase(s) : R11 : Highly flammable

R20/22 : Harmful by inhalation and if swallowed.

R36/37 : Irritating to eyes and respiratory system.

S Phrase(s) : S2 : Keep out of the reach of children.

S9 : Keep container in a well-ventilated place.

S16 : Keep away from sources of ignition - No smoking

. S24 : Avoid contact with skin.

S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S33 : Take precautionary measures against static discharges.

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms

Signal words : Danger

Hazard statements : H225 : Highly flammable liquid and vapour.

H302 : Harmful if swallowed.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

Precautionary statements

☒ General : P102: Keep out of reach of children.

P103: Read label before use.

P101: If medical advice is needed, have product container or label at hand

. ☒ Prevention : P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating, lighting, , equipment.

P210: Keep away from heat, sparks, open flames or hot surfaces. ☒ No smoking.

P280: Wear protective gloves, protective clothing, eye protection, face protection.

P271: Use only outdoors or in a well-ventilated area

. P261: Avoid breathing dust, fume, gas, mist, vapours, spray.

P233: Keep container tightly closed

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. P264: Wash thoroughly after handling.

P270: Do not eat, drink or smoke when using this product

. ☒ Response : P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.

P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.

P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction

. ☒ Storage : P403+P233: Store in well-ventilated place. Keep container tightly closed.

P403+P235: Store in well-ventilated place. Keep cool

. P405: Store locked up.

☒ Disposal considerations : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 3.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

## 4. First Aid Measures

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### 4.1. Description of first aid measures

Inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing

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

Skin contact : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.

Eye contact : Get medical advice. Rinse cautiously with water for several minutes. If eye irritation persists : Remove contact lenses, if present and easy to do. Continue rinsing

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. Ingestion : Obtain emergency medical attention. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

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

Symptoms relating to use : Danger of serious damage to health by prolonged exposure through inhalation. Causes serious eye irritation. May cause respiratory irritation.

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

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

## 5. Fire-fighting Measures

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### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand

. Unsuitable extinguishing media : Do not use a heavy water stream

. Surrounding fires : Use water spray or fog for cooling exposed containers

### 5.2. Special hazards arising from the substance or mixture

Flammable class : Highly flammable liquid and vapour.

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

### 5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection

. Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

## 6. Accidental Release Measures

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### 6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection.

Ventilate area.

Technical measures : Use special care to avoid static electric charges.

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Special precautions : Remove ignition sources. No naked lights. No smoking

. For non-emergency personnel : Evacuate unnecessary personnel.

## 6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters

## . 6.3. Methods and material for containment and cleaning up

Clean up methods : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage

## . 6.4. Reference to other sections

See section 8. Exposure controls/personal protection

# 7. Handling and Storage

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## 7.1. Precautions for safe handling

Handling : Handle empty containers with care because residual vapours are flammable

. Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, , equipment

. Special precautions : No naked lights. No smoking. Avoid breathing dust, fume, gas, mist, vapours, spray.

## 7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Ground/bond container and receiving equipment. Keep container tightly closed.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

## 7.3. Specific end use(s)

Specific end use(s) : None..

### 8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure

. ☒ Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

. ☒ Hand protection : Wear protective gloves

. ☒ Eye protection : Chemical goggles or safety glasses.

. ☒ Others : When using, do not eat, drink or smoke.

### 8.2. Control parameters

Occupational Exposure Limits : No data available.

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Liquid.

Odour threshold : No data available

pH value : No data available

. Melting point [°C] : -80 °C

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : 4550C

Flammability (solid, gas) : Flammable.

Highly flammable liquid and vapour.

Flash point [°C] : -19 °C

Boiling point [°C] : 52 - 54 °C

Initial boiling point [°C] : 54 °C

Final boiling point [°C] : 54 °C

Evaporation rate : N/A

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Vapour pressure [20°C] : 261.2 hPa at 20 °C

Vapour pressure mm/Hg : N/A

Vapour density : 2,56 Density [g/cm<sup>3</sup>] : 0,917

Relative density, gas (air=1) : N/A

Relative density, liquid (water=1) : N/A

Solubility in water [% weight] : 9 g. / 100 ml water

Solubility in water : N/A

Log Pow octanol / water at 20°C : No data available.

Solubility : N/A

Viscosity at 40°C [mm<sup>2</sup>/s] : N/A

## 9.2. Other information

Explosive properties : N/A

Explosion limits - upper [%] : 16%

Explosion limits - lower [%] : 2,80%

Oxidising properties : No data available

## 10. Stability and reactivity

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### 10.1. Reactivity

Reactivity : Not established.

### 10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

### 10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures. Open flame

### 10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

May release flammable gases

## 11. Toxicological information

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### 11.1. Information on toxicological effects

Acute toxicity ☒

Inhalation : Harmful if inhaled.

☒ Dermal : Based on available data, the classification criteria are not met

. ☒ Ingestion : Harmful if swallowed

. Corrosion : Based on available data, the classification criteria are not met.

Irritation : Causes serious eye irritation. May cause respiratory irritation.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

## 12. Ecological information

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### 12.1. Toxicity

Toxicity information : Not established.

### 12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

### 12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

### 12.4. Mobility in soil

Mobility in soil : Not established.

### 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be

identified as PBT substance or vPvB substance according to Annex XIII of Regulation

REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

## 13. Disposal considerations

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13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Special precautions : Handle empty containers with care because residual vapours are flammable

## 14. Transport information

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14.1. Land transport (ADR-RID)

Proper shipping name : ETHYL FORMATE

UN N° : 1190

H.I. nr : 33

ADR - Class : 3

Labelling - Transport : 3 : Flammable liquid.

ADR - Classification code : F1

ADR - Group : II

ADR - Packing instructions : P001 R001

ADR - Limited Quantity : 1 L

ADR - Tunnel code : D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only]

Proper shipping name : ETHYL FORMATE

UN N° : 1190

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IMO-IMDG - Class or division : 3 : Flammable liquid.

IMO-IMDG - Packing group : II

IMO- IMDG - Packing instructions : P001

IMO-IMDG - Limited quantities : 1 L

IMO-IMDG - Marine pollution : No

EMS-Nr : F-E S-D

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : ETHYL FORMATE

UN N° : 1190

IATA - Class or division : 3 : Flammable liquid.

IATA - Packing group : II

IATA - Passenger and Cargo Aircraft : ALLOWED

- Passenger and Cargo - Packing : 353

instruction - Passenger and Cargo - Maximum : 5 L

Quantity/Packing

IATA - Cargo only : ALLOWED -

Cargo only - Packing instruction : 364

- Cargo only - Maximum Quantity/ : 60 L

Packing

IATA - Limited Quantities : 1 L

ERG-Nr : 3H.

## 15. Regulatory information

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

Safety, health and environmental : Ensure all national/local regulations are observed . regulations/legislation specific for the substance or mixture

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

Chemical Safety Assessment : It has not been carried out.

## 16. Other information

[www.rxmarine.com](http://www.rxmarine.com)

Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN

PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification,

labelling and packaging of substances and mixtures, amending and repealing Directives

67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation

(CE) N° 1272/2008

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