

**1. PRODUCT AND COMPANY IDENTIFICATION:**

<b>PRODUCT CODE</b>	A0229
<b>PRODUCT NAME</b>	FRUCTONE
<b>SUPPLIER</b>	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

**2. HAZARD IDENTIFICATION:**

**Emergency Overview**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids	(Category 4)
Skin irritation	(Category 2)
Eye irritation	(Category 2A)
Specific target organ toxicity - single exposure	(Category 3), Respiratory system

**GHS Label elements, including precautionary statements**

**Pictogram:**



**Signal word**

Warning

**Hazard statement(s)**

H227	Combustible liquid.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

**Precautionary statement(s)**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
------	--

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 P352	IF ON SKIN: Wash with plenty of soap and water.
P304 P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 P351 P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P321	Specific treatment (see supplemental first aid instructions on this label).
P332 P313	If skin irritation occurs: Get medical advice/ attention.
P337 P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 P233	Store in a well-ventilated place. Keep container tightly closed.
P403 P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**HMIS Classification**

Health hazard 1  
 Flammability 2  
 Physical hazards 1

**NFPA Rating**

Health hazard 1  
 Fire 2  
 Reactivity Hazard 0

**Potential Health Effects**

**Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Skin**

May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**

Causes eye irritation.

**Ingestion**

May be harmful if swallowed.

**3. COMPOSITION AND INFORMATION ON INGREDIENTS:**

**SYNONYM:** 2-(2-Methyl-1,3-dioxolan-2-yl)acetic Acid Ethyl Ester  
Ethylacetoacetate Ethylene Glycol Ketal

**Formula:** C<sub>8</sub> H<sub>14</sub> O<sub>4</sub>

**Molecular Weight:** 174.20 g/mol

**CAS-No.:** 6413-10-1

**EC-No.:** 229-114-0

**Index-No.:** N/A

**Concentration:** N/A

#### 4. FIRST-AID GUIDE:

##### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### **If inhaled**

Call emergency medical service. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

##### **In case of skin contact**

Call a poison center or doctor if you feel unwell. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

##### **In case of eye contact**

In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists get medical advice/attention. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

##### **If swallowed**

If swallowed, seek medical advice immediately and show the container or label. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

#### 5. FIRE-FIGHTING GUIDE:

##### **Conditions of flammability**

Not flammable or combustible.

##### **Suitable extinguishing media**

Dry chemical, CO<sub>2</sub>, water spray, or alcohol-resistant foam. Consult with local fire authorities before attempting larger scale firefighting operations.

### **Special protective equipment for firefighters**

Wear positive pressure self-contained breathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

### **Hazardous combustion products**

These products include: Carbon oxides.

## **6. ACCIDENTAL RELEASE GUIDE:**

### **Personal precautions**

Use spark-proof tools and explosion-proof equipment. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

### **Methods and materials for containment and cleaning up**

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). All equipment used when handling the product must be grounded. Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material.

## **7. HANDLING AND STORAGE:**

### **Precautions for safe handling**

Do NOT breathe gas, fumes, vapor, or spray. Avoid contact with skin and eyes. Keep away from heat and sources of ignition. Use explosion-proof equipment. Use only non-sparking hand tool when handling this product. Ground all equipment containing material. Take measures to prevent buildup of electrostatic charge. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition.

### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Keep away from sources of ignition. Store and use away from heat, sparks, open flame, or any other ignition source. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept

upright to prevent leakage. Avoid prolonged storage periods.

## 8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

<b>Appearance</b>	
<b>Form</b>	LIQUID
<b>Colour</b>	COLORLESS TO PALE YELLOW
<b>Safety data</b>	
<b>pH</b>	no data available
<b>Melting point (°C)</b>	no data available
<b>Boiling point (°C)</b>	no data available
<b>Flash point (°F) Closed cup</b>	199
<b>Ignition temperature</b>	no data available
<b>Auto ignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Vapour pressure (mm Hg@20 °C)</b>	0.200

<b>Density @25 °C</b>	1.083
<b>Water solubility</b>	INSOLUBLE
<b>Partition coefficient (n-octanol/water)</b>	no data available
<b>Relative vapour density</b>	no data available
<b>Odor</b>	FRUITY
<b>Odour Threshold</b>	no data available
<b>Evaporation rate</b>	no data available

## 10. STABILITY AND REACTIVITY:

### **Chemical stability**

No data available

### **Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

No data available

### **Materials to avoid**

No data available

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION:

### **Acute toxicity**

#### **Oral LD50**

Oral-rat LD50:>5 g/kg

#### **Inhalation LC50**

No data available

#### **Dermal LD50**

Skin-rat LD50:.5 g/kg

### **Other information on acute toxicity**

No data available

### **Skin corrosion/irritation**

No data available

### **Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity****IARC:**

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.

**ACGIH:**

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.

**NTP:**

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.

**OSHA:**

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.

**Reproductive toxicity**

No data available

**Teratogenicity**

No data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

**Aspiration hazard**

No data available

**Potential health effects****Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion**

May be harmful if swallowed.

**Skin**

May be harmful if absorbed through skin May cause skin irritation.

**Eyes**

May cause eye irritation.

**Signs and Symptoms of Exposure**

No data available

**Additional Information**

RTECS: JH6762500

**12. ECOLOGICAL INFORMATION:**

**Toxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

**13. DISPOSAL RECOMMENDATIONS:**

**Product**

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system.

This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

**Contaminated packaging**

Dispose of as unused product

**14. TRANSPORTATION INFORMATION:**



**DOT (US)**

Not dangerous goods.

**IMDG**

Not dangerous goods.

**IATA**

Not dangerous goods.

**15. REGULATORY INFORMATION:****OSHA Hazards**

No known OSHA hazards.

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

No SARA hazards

**Massachusetts Right to Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components**

No components are subject to the Pennsylvania Right to Know Act.

**New Jersey Right to Know Components**

No components are subject to the New Jersey Right to Know Act.

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION:**

The information in this SDS 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 SDS. 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 SDS. The user should review these regulations to ensure full compliance.

**Prepared By:** M&U International LLC

**REVISED:** 02/17/2015