

	<b>Material Safety Data Sheet</b>	Date of Issue	Feb.13.2008
		Date of Rev.	Oct.31.2015
	<b>MIDAS SP-325</b>		Rev. No

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name : MIDAS SP-325**

**Recommended use of the chemical and restrictions on use :**

Not applicable

**Information on manufacture/supplier/distributor**

Company name : Miwon Chemicals co.,Ltd.

Address : 247, Jangsaengpo-ro, Nam-Gu, Ulsan, 680-050, KOREA

**Emergency telephone**

Tel : +82-52-261-7988

Fax : +82-52-269-8413

## 2. HAZARDS IDENTIFICATION

**Hazard classification**

Skin irritation

Category 2

**Label elements including precautionary statements**

**Pictograms**



**Signal words : WARNING**

**Hazard statements**

H315 Causes skin irritation.

**Precautionary statements**

**Prevention**

P264 Wash ... thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P302 + P352 If on skin: Wash with plenty of soap and water.

P321 Specific treatment (see ... on this label)

P332 + P313 If a skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

**Storage**

Not applicable

**Disposal**

Not applicable

**Other hazards which do not result in classification**

NFPA Rating : Health=1, Flammability=1, Instability=0

(0 = Insignificant / 1 = Slight / 2 = Moderate / 3 = High / 4 = Extreme)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name : Sulfur

Common name and Synonym : Brimstone

CAS no. or Identification no. : 7704-34-9

Content : 100%

## 4. FIRST AID MEASURES

**Eye contact**

Wash eyes immediately with large amounts of water or normal saline. Get medical attention immediately.

**Skin contact**

Wash with soap or mild detergent and large amounts of water until no evidence of chemical.

#### **Inhalation**

Remove person from exposure to fresh air immediately. If not breathing, give artificial respiration. Provide symptomatic/supportive care as necessary. Treatment based on sound judgment of physician and individual reactions of patient. Get medical attention immediately.

#### **Ingestion**

Never give anything by mouth to an unconscious person. Make a conscious person vomit.

#### **Most Important acute and delayed symptoms/effects**

Not available.

#### **First aid and notes for physicians**

Not available.

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### **5. FIRE FIGHTING MEASURES**

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#### **Suitable(and unsuitable) extinguishing media**

Suitable extinguishing media : Use water fog, foam, sand or soil

Unsuitable extinguishing media : Don't use high pressure water

#### **Specific hazards arising from the chemical(e.g hazardous combustion products**

Decomposition in fire may produce toxic gases(toxic and corrosive sulfur dioxide).

#### **Special protective equipment and precautions for fire-fighters**

Firefighters should wear full impervious protective clothing, including self-contained breathing equipment for toxic and corrosive sulfur dioxide.

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### **6. ACCIDENTAL RELEASE MEASURES**

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#### **Measures required for personal and protective equipment**

Stand with the wind at one's back. Wear appropriate clothing and respiratory protection.

#### **Measures required for environment protection**

Atmosphere : Not available

Soil : Not available

Water : Try to prevent the material from entering drains or water courses.

#### **Clean-up and removal method**

Small spills : Collect spilled material in appropriate container for disposal. Remove container from disposal.

Large spills : Dike for later disposal. Remove sources of ignition. Spry a little water at the bottom. Keep unnecessary people away, isolate hazard area and deny entry.

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

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#### **Precautions for safe handling**

Keep away from heat/sparks/open flames/hot surfaces – No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Keep away from halide, strong acid, alkali, oxidizer, etc.

#### **Conditions for safe storage(including incompatibilities)**

Mark 'DANGER' at container of product. Lock a storing place. Keep away from heat/sparks/open flames/hot surfaces. Local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Keep away from halide, strong acid, alkali, oxidizer, etc.

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### **8. EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

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#### **Exposure limits of the chemical substance,biological exposure limits and etc.**

Internal regulation : Not available

ACGIH : Not available

TLV-TWA : Not available

#### **Appropriate engineering controls**

Local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Prepare the cleaning system near handling area.

### Personal protective equipment

Protection of respiratory system  
Wear appropriate respiratory protection and dustproof mask.

### Eye protection

Wear safety glasses or goggles to protect against exposure.

### Hand protection

Use gloves as a standard industrial handling procedure

### Body protection

Wear appropriate chemical resistant clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	Lemon yellow, solid
Odor	Odorless
Odor threshold	Not available
pH	Not applicable
Melting point/freezing point	113°C
Initial boiling point/boiling range	445°C
Flash Point	218°C @761mmHg
Evaporation rate	Not available
Flammability(solid,gas)	Not available
Upper/lower flammable or explosive limits	Non-explosive
Vapor Pressure	0.00021Pa @25°C
Solubility	<0.005mg/L @22°C, pH7
Vapor Density	Not applicable
Specific gravity	2.07g/cm <sup>3</sup> @25°C
Partition coefficient/n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available
Molecular Weight	32.07

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## 10. STABILITY AND REACTIVITY

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### Chemical stability

This material is stable under recommended storage and handling conditions. Causes dust explosion when dust of product mix air. Stiring, transport and feeding of product produces static electricity in dry condition.

### Possibility of hazardous reactions

Avoid strong acid.

### Conditions to avoid

Avoid heat, flames, sparks and other sources of ignition.

### Incompatible materials

Metallic salt, base, oxidizer, halide, flammable materials, metallic oxide, reductant

### Hazardous decomposition products

Toxic and corrosive sulfur dioxide

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## 11. TOXICOLOGICAL INFORMATION

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### Information on the likely routes of exposure

Respiratory system : Irritation  
Oral : Not available  
Eye : Not available  
Skin : Not available

### Delayed and immediate effects and chronic effects form short or long term exposure

Acute toxicity(All routes of possible exposure shall be mentioned.)

Oral (LD50) : > 2000 mg/kg (Rat)

Skin (LD50) : > 2000 mg/L (Rat)

Inhalation(LD50) : >5.43g/m<sup>3</sup> (Rat)

Skin corrosion/irritation : irritation

Serious eye damage/eye irritation(Draize test) : Non-irritation

Respiratory sensitization : Not available  
Skin sensitization(Patch test) : No sensitization  
Carcinogenicity : Not available  
Germ cell mutagenicity : Not available  
Reproductive toxicity : Not available  
Specific target organ toxicity (single exposure) : Not available  
Specific target organ toxicity (repeated exposure) : Not available  
Aspiration hazard : Not available

**Numeric measure of toxicity(acute toxicity estimation) : Not available**

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## 12. EFFECTS ON THE ENVIRONMENT

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### Aquatic and terrestrial ecotoxicity

Fish : LC50 than the solubility limit, 96hr  
Crustacea : EC50 the the solubility limit, 48hr

**Persistence and degradability : Not available**

**Bioaccumulation : Not available**

**Mobility in Soil : Not available**

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## 13. DISPOSAL CONSIDERATIONS

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### Disposal methods

Bury in soil.

**Precautions for disposal (Including the disposal method of contaminated container and packages)**

Don't burn at normal incinerator. Request a waste disposal handler plenty of waste disposal.

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## 14. TRANSPORT INFORMATION

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### UN number

Not applicable

### UN proper shipping name

Not applicable

### Transport hazard classes

Not applicable

### Packing group

Not applicable

### Marine pollutant(yes/no)

Not applicable

**Information on any special precautions, which a user needs to be aware of, or needs to comply with in connection with transport :**

Indicate product name, quantity, hazard class and flammable mark at container.

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## 15. REGULATORY INFORMATION

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### Industrial Safety and Health Law :

Not regulated

### Toxic Chemical Control Law :

Not regulated

### Dangerous Substance Safety Management Law :

Class 2 (Sulfur)

### Wastes Management Law :

Designed wastes

### Other regulations in domestic and foreign countries :

Not available

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## 16. OTHER INFORMATION

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### Sources of reference materials

European Chemical Agency(ECHA)

Others