

## SAFETY DATA SHEET

according to Regulation (EC) No.-

### Section 1. Product and Company Information

**GHS Product Name:** Ferulic Acid

**Product Code:** PHE-9-100

**CAS:** [537-98-4]

**Molecular Formula:** C<sub>10</sub>H<sub>10</sub>O<sub>4</sub>

(E)-3-(4-hydroxy-3-methoxyphenyl)prop-2-enoic acid; trans-Ferulic Acid; Coniferic acid; 3-(4-hydroxy-3-methoxyphenyl)prop-2-enoic acid; 4-Hydroxy-3-methoxycinnamic acid; 4-Hydroxy-3-methoxycinnamate; 3-(4-Hydroxy-3-methoxyphenyl)acrylic acid; Asam Ferulat (INA);

**Company:** MarkHerb

**Address:** Gedung Riset dan Inovasi (ex. PAU Lt. 8), Institut Teknologi Bandung, Jl Ganesha 10, Bandung 40132

**Tel.:** +62 877-4556-0063

**Fax:** -

**Website:** [www.markherb.com](http://www.markherb.com)

**E-mail:** [info@markherb.com](mailto:info@markherb.com)

### Section 2. Hazards Identification

#### 2.1 GHS classification

**PHYSICAL HAZARDS** Not classified

**HEALTH HAZARDS**

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

**ENVIRONMENTAL HAZARDS** Not classified

#### 2.2 GHS label elements, including precautionary statements

**Pictograms or hazard symbols**



**Signal word** Warning

**Hazard statements**

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

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**Precautionary statements**

P261	Avoid breathing dust.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + 340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician 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.
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
P403 + P233	Store in a well-ventilated place. Keep container tightly closed
P405	Store locked up
P501	Dispose of contents/container to an approved waste disposal plant

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**Section 3. Information on Basic Physical and Chemical Properties**

<b>Physical States:</b>	[ ] Gas [ ] Liquid [ X ] Solid
<b>Melting Point:</b>	168-172°C
<b>Boiling Point:</b>	372.3±27.0°C at 760 mmHg
<b>Flash Pt:</b>	150.5±17.2°C
<b>Evaporation Rate:</b>	No data
<b>Flammability (solid, gas):</b>	No data available.
<b>Explosive Limits:</b>	<b>LEL:</b> No data. <b>UEL:</b> No data
<b>Vapor Pressure (vs. Air or mm Hg):</b>	0.0±0.9 mmHg at 25°C
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data
<b>Solubility in Water:</b>	No data
<b>Solubility Notes:</b>	~0.14 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2); ~10 mg/ml in EtOH; ~15 mg/ml in DMSO; ~20 mg/ml in DMF;
<b>Autoignition Pt:</b>	No data
<b>Percent Volatile:</b>	No data
<b>Partition coefficient:</b>	log Pow: 1.68 (n-octanol/water)
<b>pH:</b>	No data

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**Section 4. First aid measures****Description of first aid measures****If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**

Wash off with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**In case of eye contact**

Hold eyelids apart and rinse thoroughly with plenty of water for at least 15 minutes.

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**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labelling (see **section 2.2**).

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

No data available

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## Section 5. Fire Fighting Measures

**Suitable extinguishing**

**Media:** Dry chemical, alcohol-resistant foam, water spray, carbon dioxide.

**Precautions for firefighters:** Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

**Special protective:**

**equipment for firefighters:** When extinguishing fire, be sure to wear personal protective equipment.

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## Section 6. Accidental Release Measures

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**

Do not let product enter drains.

**General Information:**

Use proper personal protective equipment as indicated in **Section 8**.

**Spills/Leaks:**

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete.

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## Section 7. Handling and Storage

**Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Storage:**

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

Recommended storage temperature 2-8°C.

**Specific end uses**

Use in a laboratory fume hood where possible. Refer to employer is COSHH risk assessment.

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## Section 8. Exposure Controls / Personal Protection

**Engineering controls:**

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Handle in accordance with good industrial hygiene and safety practice. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Wash hands before breaks and at the end of workday.

**Control parameters:** Not set up

**Personal protective equipment:**

**Respiratory protection:** Dust respirator. Follow local and national regulations.

**Hand protection:** Protective gloves.

**Eye protection:** Wear safety glasses and chemical goggles if splashing is possible.

**Skin and body protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

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## Section 9. Stability and Reactivity

### Reactivity

Stable under recommended transport or storage conditions.

### Chemical Stability

Stable under normal temperatures and pressures

### Conditions to Avoid

Incompatible materials, strong oxidants, heat.

### Incompatibilities with Other Materials

Strong oxidising/reducing agents, strong acids/alkalis.

### Hazardous Decomposition Products

Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

### Hazardous Polymerization

Has not been reported.

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## Section 10. Toxicological Information

**Acute Toxicity:** LD50 Intraperitoneal - Mouse - 194 mg/kg

**Skin corrosion/irritation:** Causes skin irritation

**Serious eye damage/irritation:** Causes serious eye irritation

**Germ cell mutagenicity:** Genotoxicity in vitro - Hamster - Ovary  
Cytogenetic analysis

**Carcinogenicity:** IARC = No data NTP = No data

**Reproductive toxicity:** Reproductive toxicity - Mammal - Oral  
Maternal Effects: Uterus, cervix, vagina

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## Section 11. Ecological Information

**Toxicity:** Do not empty into drains

**Persistence and degradability:** No data

**Bioaccumulative potential:** No data

**Mobility in soil:** No data

**Results of PBT & vPvB assessment:** No data

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**Other adverse effects:**

Slightly hazardous to water

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## **Section 12. Disposal Considerations**

Dispose of in a manner consistent with federal, state, and local regulations.

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## **Section 13. Transport Information**

### **Hazards Class**

Does not meet the criteria for classification as hazardous for transport.

### **UN proper shipping name ADR/RID**

Not dangerous goods

### **IMDG**

Not dangerous goods

### **IATA**

Not dangerous goods

### **Transport hazard class(es)**

Does not meet the criteria for classification as hazardous for transport.

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## **Section 14. Regulatory Information**

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

no data

### **Chemical Safety Assessment**

no data

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## **Section 15. Additional Information**

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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**-----End of safety data sheet-----**