Material Safety Data Sheet
Ferrocenecarboxaldehyde

MSDS# 99303

Section 1 - Chemical Product and Company Identification

MSDS Name: Ferrocenecarboxaldehyde
Catalog Numbers: AC153530000, AC153530010, AC153530050
Synonyms: Cyclopentadienyl(formylcyclopentadienyl)iron.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticalalaan 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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CAS#: 12093-10-6
Chemical Name: Ferrocenecarboxaldehyde
%: 98
EINECS#: 235-158-1
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Hazard Symbols: T

Risk Phrases: 25

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Warning! Toxic if swallowed. Target Organs: None known.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. Toxic if swallowed.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.
Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and
shoes. Get medical aid if irritation develops or persists.

Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.
Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not applicable.
Flash Point: Not applicable.

Explosion Limits:
Lower: Not available
Upper: Not available

NFPA Rating: health: 3; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale.
Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
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<tbody>
<tr>
<td>Ferrocenecarboxalde</td>
<td>none listed</td>
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OSHA Vacated PELs: Ferrocenecarboxaldehyde: None listed

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Color: red - brown
Odor: Not available
pH: Not available  
Vapor Pressure: Not available 
Vapor Density: Not available 
Evaporation Rate: Not available 
Viscosity: Not available 
Boiling Point: Not available 
Freezing/Melting Point: 120 - 124 deg C 
Decomposition Temperature: Not available 
Solubility in water: insoluble 
Specific Gravity/Density:  
Molecular Formula: C11H10FeO  
Molecular Weight: 214.05  
Section 10 - Stability and Reactivity  
Chemical Stability: Stable under normal temperatures and pressures.  
Conditions to Avoid: Incompatible materials, dust generation, excess heat.  
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases.  
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, oxides of iron.  
Hazardous Polymerization: Will not occur.  
Section 11 - Toxicological Information  
RTECS#: CAS# 12093-10-6: None listed  
LD50/LC50: RTECS: Not available.  
Carcinogenicity: Ferrocenecarboxaldehyde - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Other: The toxicological properties have not been fully investigated.  
Section 12 - Ecological Information  
Other: Do not empty into drains.  
Section 13 - Disposal Considerations  
Dispose of in a manner consistent with federal, state, and local regulations.  
Section 14 - Transport Information  
US DOT  
Shipping Name: Please contact Fisher Scientific for shipping information  
Hazard Class:  
UN Number:  
Packing Group:  
Canada TDG  
Shipping Name: Not available  
Hazard Class:  
UN Number:  
Packing Group:  
Section 15 - Regulatory Information  
European/International Regulations  
European Labeling in Accordance with EC Directives  
Hazard Symbols: T  
Risk Phrases:  
R 25 Toxic if swallowed.  
Safety Phrases:  
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
WGK (Water Danger/Protection)
CAS# 12093-10-6: Not available

Canada

CAS# 12093-10-6 is listed on Canada's NDSL List
Canadian WHMIS Classifications: D1B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 12093-10-6 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 12093-10-6 is listed on the TSCA Inventory.

Section 16 - Other Information
MSDS Creation Date: 6/14/1999
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility 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 event 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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