Material Safety Data Sheet
Trans, Trans, Cis-1,5,9-Cyclododecatriene, 98+%  

MSDS# 08489  

Section 1 - Chemical Product and Company Identification  
MSDS Name: Trans, Trans, Cis-1,5,9-Cyclododecatriene, 98+%  
Catalog Numbers: AC110980000, AC110980010, AC110980050, AC110980250  
Synonyms: None.  
Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticalaan 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  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300  
CHEMTREC Phone Number, Europe: 703-527-3887  

Section 2 - Composition, Information on Ingredients  
CAS#: 2765-29-9  
Chemical Name: Trans, Trans, Cis-1,5,9-Cyclododecatriene  
%: 98+  
EINECS#: 220-437-2  

Hazard Symbols: XN  
Risk Phrases: 20 43  

Section 3 - Hazards Identification  
EMERGENCY OVERVIEW  
Warning! Combustible liquid and vapor. May cause allergic skin reaction. The toxicological properties of this material have not been fully investigated. May cause central nervous system depression. May cause eye, skin, and respiratory tract irritation. Target Organs: Central nervous system.  

Potential Health Effects  
Eye: May cause eye irritation. May cause chemical conjunctivitis and corneal damage.  
Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause irritation and dermatitis. May cause cyanosis of the extremities.  
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated. May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Aspiration may lead to pulmonary edema. Inhalation at high concentrations may cause CNS depression and asphyxiation.
Chronic: Repeated exposure may cause sensitization dermatitis.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid. Containers may explode when heated.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not available

Flash Point: 87 deg C (188.60 deg F)

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; flammability: 2; instability: 0;

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans, Trans, Cis-1</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>,5,9-Cyclododecatriene</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Trans, Trans, Cis-1,5,9-Cyclododecatriene: 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: Liquid
Color: colorless
Odor: Not available
pH: Not available
Vapor Pressure: Not available
Vapor Density: 5.60
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 237 deg C @ 760.00mm Hg (458.60°F)
Freezing/Melting Point: -17 deg C (1.40°F)
Decomposition Temperature: Not available
Solubility in water: Not available
Specific Gravity/Density: .8900g/cm3
Molecular Formula: C12H18
Molecular Weight: 162.27

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials: Not available
Hazardous Decomposition Products: Carbon monoxide, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 2765-29-9: None listed
LD50/LC50: RTECS: Not available.
Carcinogenicity: Trans, Trans, Cis-1,5,9-Cyclododecatriene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

US DOT
Shipping Name: 1,5,9-CYCLODODECATRIENE
Hazard Class: 6.1
UN Number: UN2518
Packing Group: III
Canada TDG
Shipping Name: Not available
Hazard Class:
Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 20 Harmful by inhalation.
R 43 May cause sensitization by skin contact.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.
S 24/25 Avoid contact with skin and eyes.
S 28A After contact with skin, wash immediately with plenty of water.
S 37 Wear suitable gloves.
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# 2765-29-9: Not available

Canada

Canadian WHMIS Classifications: B3, D2B

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# 2765-29-9 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 2765-29-9 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Other Information

MSDS Creation Date: 5/28/1999
Revision #5 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.