



TCI Chemicals (India) Pvt. Ltd.

# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision number: 3

Revision date: 10/30/2014

## 1. IDENTIFICATION

### Identification of the substance or preparation

**Product name:** Methyl-5-norbornene-2,3-dicarboxylic Anhydride (mixture of isomers)  
**Product code:** M0690

### Use of the substance/preparation

**Recommended use:** Reagents

### Company/undertaking identification

TCI Chemicals (India) Pvt. Ltd.  
 Plot No. B-28, Phase II,  
 5th Cross Street, MEPZ-SEZ, Tambaram,  
 Chennai, Tamilnadu - 600045  
 India  
 Telephone: +91-44-2262 0909

### Emergency telephone number:

+91-44-2262 0909

## 2. HAZARDS IDENTIFICATION

### Indication of danger:

Xn - Harmful.  
 C - Corrosive  
 R22 - Harmful if swallowed.  
 R34 - Causes burns.  
 R41 - Risk of serious damage to eyes.

### R-phrases)

### GHS classification

#### PHYSICAL HAZARDS

Not classified

#### HEALTH HAZARDS

Acute toxicity (Oral)  
 Acute toxicity (Dermal)  
 Skin corrosion/irritation  
 Serious eye damage/eye irritation

Category 4  
 Category 5  
 Category 1C  
 Category 1  
 Not classified

#### ENVIRONMENTAL HAZARDS

### GHS label elements, including precautionary statements

#### Pictograms or hazard symbols



### Signal word

Danger

### Hazard statements

H302-Harmful if swallowed.  
 H313-May be harmful in contact with skin.  
 H314-Causes severe skin burns and eye damage.

### Precautionary statements

#### [Prevention]

P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
 P270-Do not eat, drink or smoke when using this product.  
 P264-Wash hands thoroughly after handling.  
 P280-Wear protective gloves/eye protection/face protection.  
 P304+P340-IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P301+P330+P331-IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P303+P361+P353-IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P363-Wash contaminated clothing before reuse.  
 P310-Immediately call a POISON CENTER or doctor/physician.  
 P405-Store locked up.  
 P501-Dispose of contents/container through a waste management company authorized by the local government

#### [Response]

#### [Storage]

#### [Disposal]

**M0690**

**Methyl-5-norbornene-2,3-dicarboxylic Anhydride (mixture of isomers)**

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	Methyl-5-norbornene-2,3-dicarboxylic Anhydride (mixture of isomers)
Percent:	>80.0%(GC)
CAS Number:	25134-21-8
EC-No:	246-644-8
Synonyms:	Methyl-3,6-endomethylenetetrahydrophthalic Anhydride (mixture of isomers) , Methylindac Anhydride (mixture of isomers)
Chemical Formula:	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>

### 4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
Most important symptoms/effects, acute and delayed:	Burning sensation, Cough, Asthma, Laryngitis, Shortness of breath, Headache, Nausea, Vomiting
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.
Indication of immediate medical attention and special treatment needed, if necessary:	Medical observation is indicated.

### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, water spray, carbon dioxide.
Unsuitable extinguishing media:	Solid streams of water
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.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in a suitable absorbent (e.g. rag, dry sand, earth, saw-dust). In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

### 7. HANDLING AND STORAGE

<b>Precautions for safe handling</b>	
Technical measures:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Wash hands and face thoroughly after handling.
Advice on safe handling:	Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.
<b>Conditions for safe storage, including any incompatibilities</b>	
Storage conditions:	Avoid contact with skin, eyes and clothing.
	Keep container tightly closed. Store in a cool and dark place.
	Store under inert gas.
	Protect from moisture.
	Store locked up.
	Store away from incompatible materials such as oxidizing agents.
	Moisture-sensitive
Packaging material:	Comply with laws.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Install a closed system or local exhaust. Also install safety shower and eye bath.
<b>Personal protective equipment</b>	
Respiratory protection:	Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
Hand protection:	Impervious gloves.
Eye protection:	Safety goggles. A face-shield, if the situation requires.
Skin and body protection:	Impervious protective clothing. Protective boots, if the situation requires.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Liquid
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Clear
Colour:	Colorless - Pale yellow
Odour:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Boiling point/range:	No data available
Flash point:	135°C
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Vapour pressure:	0.67kPa/120°C
Vapour density:	6.1
Relative density:	1.23
Solubility(ies):	
[Water]	No data available
[Other solvents]	
Miscible:	Benzene, Acetone

## 10. STABILITY AND REACTIVITY

Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	No special reactivity has been reported.
Incompatible materials:	Oxidizing agents, Strong acids, Strong bases
Hazardous decomposition products:	Carbon monoxide, Carbon dioxide

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	skn-rat LD50:4920 mg/kg ihl-rat LCLo:750 mg/m <sup>3</sup> /4H orl-rat LD50:914 mg/kg ipr-musLD50:100 mg/kg
Skin corrosion/irritation:	
Serious eye damage/irritation:	
Germ cell mutagenicity:	
Carcinogenicity:	
Reproductive toxicity:	
RTECS Number:	RB9100000

\*We judged that this product was not classified into Class 6.1 Toxic Substance of current edition of IATA Dangerous Goods Regulations(DGR) according to acute toxicity values and/or Quantitative Structure-Activity Relationship(QSAR).

## 12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	No data available
Soil adsorption (Koc):	No data available
Henry's Law constant(PaM <sup>3</sup> /mol):	No data available

## 13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

## 14. TRANSPORT INFORMATION

UN-No:	3265
ADR/RID	
Hazards Class:	8: Corrosive.
Proper shipping name:	Corrosive liquid, acidic, organic, n.o.s.
Packing group:	III
IMDG/IMO	
Hazards Class:	8: Corrosive.
Proper shipping name:	Corrosive liquid, acidic, organic, n.o.s.
Packing group:	III
ICAO/IATA	
Hazards Class:	8: Corrosive.

#### 14. TRANSPORT INFORMATION

Proper shipping name:

Corrosive liquid, acidic, organic, n.o.s.

Packing group:

III

#### 15. REGULATORY INFORMATION

Indication of danger:

Xn - Harmful.

C - Corrosive

In accordance with local and national regulations

R-phrases(s)

R22 - Harmful if swallowed.

R34 - Causes burns.

R41 - Risk of serious damage to eyes.

S-phrases(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

#### 16. OTHER INFORMATION

Prepared by:

TCI Chemicals (India) Pvt. Ltd.

Issue date:

10/30/2014

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.

The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.