TCI (Shanghai) DEVELOPMENT CO., LTD.

2,5-Norbornadiene (stabilized with BHT)

Revision number: 1

Revision date: 12/01/2010

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SAFETY DATA SHEET

Category 2

Category 5

Category 3

Danger

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: Product code: Company: Address: **Responsible Department:** Telephone: Fax: e-mail: **Revision number:**

2,5-Norbornadiene (stabilized with BHT) N0346 TCI (Shanghai) DEVELOPMENT CO., LTD. No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China Sales Department +86-(0)21-67121386 +86-(0)21-67121385 sales@tcishanghai.com.cn 1

2. HAZARDS IDENTIFICATION **Classification of the GHS PHYSICAL HAZARDS** Flammable liquids **HEALTH HAZARDS** Acute toxicity (Oral) **ENVIRONMENTAL HAZARDS** Acute aquatic toxicity **GHS** label elements

Pictograms or hazard symbols



Signal word Hazard statement

Highly flammable liquid and vapour May be harmful if swallowed Harmful to aquatic life **Precautionary statements** [Prevention] Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against ignition by the static discharge and the spark. Avoid release to the environment. Wear protective gloves/eye protection/face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse [Response] skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. Store in a well-ventilated place. Keep cool. [Storage] Dispose of contents/container through a waste management company authorized by [Disposal] the local government Other hazards which do not May cause polimerization. result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Component(s):	2,5-Norbornadiene (stabilized with BHT)
Percent:	>97.0%(GC)
CAS Number:	121-46-0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Bicyclo[2.2.1]hepta-2,5-diene (stabilized with BHT)
C ₇ H ₈

4. FIRST AID MEASURES	
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion:	Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air- tight goggles.
5. FIRE-FIGHTING MEASURES	
Suitable extinguishing	Dry chemical, foam, carbon dioxide.

media:	
Extinguishing media not to	Water (It may scatter and spread fire.)
be used:	
Specific hazards:	This substance may polimerize explosively when heated or involved in a fire.
	Container may explode when heated. Combat fire from a sheltered position.
Specific methods:	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: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

7.

0. ACCIDENTAL RELEASE IVI	LASURES
Personal precautions,	Use personal protective equipment. Keep people away from and upwind of spill/leak.
protective equipment and	Ensure adequate ventilation. Entry to non-involved personnel should be controlled
emergency procedures:	around the leakage area by roping off, etc.
Environmental precautions	: Prevent product from entering drains.
Methods and materials for	Absorb spilled material in dry sand or inert absorbent before recovering it into a
containment and cleaning	covered container. In case of large amount of spillage, contain a spill by bunding.
up:	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.
7. HANDLING AND STORAGE Handling	
Technical measures:	 Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
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Technical measures:	Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
Technical measures: Advice on safe handling:	Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath. **Personal protective equipment**

Respiratory protection:	Vapor respirator. Follow local and national regulations.
Hand protection:	Protective gloves.
Eye protection:	Safety glasses. A face-shield, if the situation requires.
Skin and body protection:	Protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Liquid
Form:	clear
Color:	Colorless - Very pale yellow
Odor:	No data available
pH:	No data available
Melting point/freezing point	No data available
Boiling Point/Range:	90 °C
Flash Point:	-19°C
Explosive limits	
Lower:	No data available
Upper:	No data available
Density:	0.91
Solubility:	Soluble in : Methanol

10. STABILITY AND REACTIVITY

Stability:Polymerization may occur under the influences of heat, light or upon contact with
polymelization initiator such as peroxides etc.Reactivity:No special reactivity has been reported.Conditions to avoid:Air-sensitive
oxidizing agentsIncompartible materials:Oxidizing agentsHazardous DecompositionCarbon monoxide, Carbon dioxideProducts:Products:

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	orl-mus LD50:3850 mg/kg ivn-mus LD50:56 mg/kg hl-rat LC50:14100 ppm/8H ipr-rat LD50:890 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Germ cell mutagenicity: Carcinogenicity:	No data available
IARC = NTP = Reproductive toxicity: RTECS Number:	No data available No data available No data available RB6535000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative	No data available
potential(BCF):	
Mobillity in soil	

12. ECOLOGICAL INFORMATION

log Pow:	No data available
Soil adsorption (Koc):	No data available
Henry's Law	No data available
constant(PaM ³ /mol):	

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 but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

Hazards Class:	3: Flammable liquid.
UN-No:	2251
Proper shipping name:	2,5-Norbornadiene, stabilized
Packing group:	II

15. REGULATORY INFORMATION

Safe management ordinance of dangerous chemical product (State Council announces on January 26, 2002): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

The list of a dangerous chemical(2002)/CN-No.: 31016

16. OTHER INFORMATION

The reference company name of written contents

Company:	TCI (Shanghai) DEVELOPMENT CO., LTD.
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