TCI (Shanghai) DEVELOPMENT CO., LTD.

2-Allyl-4,4,5,5-tetramethyl-1,3,2-dioxaborolane (stabilized with Phenothiazine)

Revision number: 1

Revision date: 11/29/2010

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SAFETY DATA SHEET

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

2-Allyl-4,4,5,5-tetramethyl-1,3,2-dioxaborolane (stabilized with Phenothiazine) **Product name: Product code:** A2157 Company: TCI (Shanghai) DEVELOPMENT CO., LTD. No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China Address: **Responsible Department:** Sales Department **Telephone:** +86-(0)21-67121386 +86-(0)21-67121385 e-mail: sales@tcishanghai.com.cn **Revision number:** 1

2. HAZARDS IDENTIFICATION

Fax:

Classification of the GHS PHYSICAL HAZARDS Flammable liquids **HEALTH HAZARDS** Skin corrosion/irritation Serious eye damage/eye irritation **ENVIRONMENTAL HAZARDS GHS** label elements

Pictograms or hazard symbols



Signal word Hazard statement

Hazard statement	Flammable liquid and vapour
	Causes skin irritation
	Causes serious eye irritation
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. Wash hands thoroughly after handling.
	Wear protective gloves/eye protection/face protection.
[Response]	IF IN EYES: 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.
	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	If skin irritation occurs: Get medical advice/attention.
	Take off contaminated clothing and wash before reuse.
[Storage]	Store in a well-ventilated place. Keep cool.
[Disposal]	Dispose of contents/container through a waste management company authorized by the local government

Category 3

Category 2 Category 2A Not classified

Warning Flammable liquid and vanour

3. COMPOSITION/INFORMATION ON INGREDIENTS

tight goggles.

Substance/mixture: Component(s):	Substance 2-Allyl-4,4,5,5-tetramethyl-1,3,2-dioxaborolane (stabilized with Phenothiazine)
Percent:	>96.0%(GC)
CAS Number:	72824-04-5
Synonyms: Chemical Formula:	Allylboronic Acid Pinacol Ester (stabilized with Phenothiazine) $C_9H_{17}BO_2$

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	Get medical advice/attention 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:	Get medical advice/attention if you feel unwell. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide.
Extinguishing media not to be used:	Water (It may scatter and spread fire.)
Specific hazards:	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
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.

ACCIDENTAL RELEASE MEASURES 6

6. ACCIDENTAL RELEASE ME	ASURES
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 an
containment and cleaning	airtight 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	Remove all sources of ignition. Fire-extinguishing devices should be prepared in
hazards:	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.
Addies on offs how War	Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
Advice on safe handling:	Avoid contact with skin, eyes and clothing.

Storage conditions:	Keep container tightly closed. Store in an explosion-poof freezer.
Storage conditions.	Store under inert gas.
	Protect from moisture.
	Store away from incompatible materials such as oxidizing agents.
Packaging material:	Law is followed.
00	
EXPOSURE CONTROLS / PI	ERSONAL PROTECTION
EXPOSURE CONTROLS / PI	
EXPOSURE CONTROLS / PI Engineering controls:	Install a closed system or local exhaust. Also install safety shower and eye bath
EXPOSURE CONTROLS / PI Engineering controls: Personal protective equipm	Install a closed system or local exhaust. Also install safety shower and eye bath
EXPOSURE CONTROLS / Pl Engineering controls: Personal protective equipm Respiratory protection:	Install a closed system or local exhaust. Also install safety shower and eye bath nent Vapor respirator. Follow local and national regulations.
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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:	35 °C/0.1kPa
Flash Point:	46°C
Explosive limits	
Lower:	No data available
Upper:	No data available
Density:	0.89
Solubility:	No data available

10. STABILITY AND REACTIVITY

Stability:	Stable under proper conditions.
Reactivity:	No special reactivity has been reported.
Conditions to avoid:	Heat-sensitive, Moisture-sensitive
Incompartible materials:	oxidizing agents
Hazardous Decomposition	Carbon monoxide, Carbon dioxide, Boron oxides
Products:	

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Germ cell mutagenicity:	No data available No data available No data available No data available
Carcinogenicity: IARC = NTP = Reproductive toxicity:	No data available No data available No data available

12. ECOLOGICAL INFORMATION

No data available
No data available
No data available
No data available

12. ECOLOGICAL INFORMATION

Bioaccumulative potential (BCF):	No data available
Mobillity in soil	
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. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	3: Flammable liquid.
UN-No:	3272
Proper shipping name:	Esters, n.o.s.
Packing group:	111

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.

16. OTHER INFORMATION

The reference company name of written contents

Company:	TCI (Shanghai) DEVELOPMENT CO., LTD.
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CDS was propored sincerely	on the basis of the information we could obtained, however, any warranty shall not be given recording the date

This MSDS 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. 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.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.