TCI (Shanghai) DEVELOPMENT CO., LTD.

N-Nitrosodipropylamine

Revision number: 1

Revision date: 12/01/2010

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SAFETY DATA SHEET

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: N-Nitrosodipropylamine N0444 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 HEALTH HAZARDS Acute toxicity (Oral) Carcinogenicity ENVIRONMENTAL HAZARDS Acute aquatic toxicity Chronic aquatic toxicity GHS label elements

Pictograms or hazard symbols



Signal word Hazard statement



Not classified

Category 4 Category 2

Category 2 Category 2

Warning Harmful if swallowed Suspected of causing cancer Toxic to aquatic life Toxic to aquatic life with long lasting effects

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Precautionary statements	
[Prevention]	Obtain special instructions before use.
	Do not handle until all safety precautions have been read and understood.
	Avoid release to the environment.
	Do not eat, drink or smoke when using this product.
	Wash hands thoroughly after handling.
	Use personal protective equipment as required.
[Response]	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	Rinse mouth.
	IF exposed or concerned: Get medical advice/attention.
	Collect spillage.
[Storage]	Store locked up.
[Disposal]	Dispose of contents/container through a waste management company authorized by
	the local government
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Component(s):	N-Nitrosodipropylamine

3. COMPOSITION/INFORMATION ON INGREDIENTS

Percent:	>98.0%(GC)
CAS Number:	621-64-7
Synonyms:	DipropyInitrosamine
Chemical Formula:	$C_6H_{14}N_2O$

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
Ingestion:	Get medical advice/attention.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 media:	Dry chemical, foam, water spray, carbon dioxide.
Specific hazards:	Explosion risk in case of fire. Fight fire remotely due to the risk of explosion. 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.

6. ACCIDENTAL RELEASE MEASURES

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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	: Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.
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 Handling	
Technical measures:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Be careful not to cause leakage, overflow, or dispersion. Steam should not be generated unnecessarily. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Avoid shock and friction. Wash hands and face before breaks and immediately after handling the product. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
Advice on safe handling: Storage	Avoid all contact!
Storage conditions:	Keep container tightly closed. Store in a cool and dark place. Store locked up. Be sure not to give the container unexpected impacts, such as falling down or falling off.

7. HANDLING AND STORAGE	
Packaging material:	Store away from incompatible materials such as oxidizing agents. Law is followed.
8. EXPOSURE CONTROLS / F	PERSONAL PROTECTION
Engineering controls: Personal protective equip	Install a closed system or local exhaust. Also install safety shower and eye bath. ment
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.

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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
Form:	clear
Color:	Pale yellow - Yellow
Odor:	No data available
pH:	No data available
Melting point/freezing point	: No data available
Boiling Point/Range:	113 °C/5.3kPa
Flash Point:	No data available
Explosive limits	
Lower:	No data available
Upper:	No data available
Vapor Pressure:	0.01kPa/20°C
Density:	0.92
Solubility:	Soluble in : Water Many organic solvents
log Pow =	1.360
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10. STABILITY AND REACTIVITY

Stability:	Stable under proper conditions.
Reactivity:	May explosively decompose on heating, shock, friction, etc.
Incompartible materials:	oxidizing agents, strong acids, metals, metal salts
Hazardous Decomposition	Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)
Products:	

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	orl-rat LD50:480 mg/kg
	scu-rat LD50:487 mg/kg
Skin corrosion/irritation:	No data available
Serious eye	No data available
damage/irritation:	
Germ cell mutagenicity:	dnd-hmn-kdy 10 mmol/L
	dns-hmn-hla 100 umol/L
	dns-hmn-lvr 1800 umol/L
	mmo-sat 1 umol/plate (-S9)
	mmo-sat 50 ug/plate/48H (+S9)
Carcinogenicity:	orl-rat TDLo:660 mg/kg/60W-I
	scu-ham TD:143 mg/kg/38W-I
IARC =	Group 2B (Possibly carcinogenic to humans).
NTP =	b (Reasonably anticipated to be carcinogens).
Reproductive toxicity:	No data available
RTECS Number:	JL9700000

12. ECOLOGICAL INFORMATION Ecotoxicity:

12. ECOLOGICAL INFORMATION

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Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative	6
potential(BCF):	
Mobillity in soil	
log Pow:	1.360
Soil adsorption (Koc):	130
Henry's Law	0.5
constant(PaM ³ /mol):	

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	9: Miscellaneous dangerous goods.
UN-No:	3082
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s.
Packing group:	III
Marine pollutant	Y

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.
Address:	No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China
Department:	R&D (Information Management) Department
Telephone:	+86-(0)21-67121388*461
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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 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.