Material Safety Data Sheet: TANK TONIC, CM

Supercedes Date 06/10/2011 **Issuing Date** 09/18/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name TANK TONIC, CM
Recommended use Biocidal product
Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 0630
Chemical nature Organic materials
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Combustible liquid and vapor
Corrosive
Causes skin and eye burns
Harmful if absorbed through skin
May cause allergic skin reaction
May cause delayed lung injury and burns
Harmful or fatal if swallowed

Color Yellow - Brown **Physical State** Liquid **Odor** Ammonia

Potential Health Effects

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Skin Absorption, Inhalation.

Acute Effects

Eyes Corrosive to the eyes and may cause severe damage including blindness.

Skin Causes burns. May be absorbed through the skin in harmful amounts. May cause allergic skin reaction.

Inhalation Harmful by inhalation. Causes burns. Inhalation may be fatal or cause delayed lung injury. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Ingestion Ingestion causes burns of the upper digestive and respiratory tracts. Aspiration hazard if swallowed - can enter lungs and cause damage.

Chronic Toxicity Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Inhaled corrosive substances can lead to a toxic edema of the lungs. May cause sensitization by skin contact. Liver and kidney injuries may occur.

Target Organ Effects Eyes, Liver, Kidney, Respiratory system, Skin, Central nervous system, Immune system.

Aggravated Medical Conditions Respiratory disorders, Skin disorders, Liver disorders, Kidney disorders, Neurological disorders.

Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
4-(2-Nitrobutyl)morpholine	2224-44-4
Methylene dimorpholine	5625-90-1
Morpholine	110-91-8
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	1854-23-5
1-Nitropropane	108-03-2

4. FIRST AID MEASURES

General advice Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician or Poison Control Centre immediately.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention if symptoms occur.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.

Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if

swallowed and enters airways. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Flash Point 160 °F / 71 °C **Method** Pensky Marten Closed Tester
Autoignition Temperature 500 °F / 260 °C
Flammability Limits in Air % Mixture. **Upper** 11.2 **Lower** 1.4
Suitable Extinguishing Media
Water spray. Dry chemical. Carbon dioxide (CO2). Alcohol-resistant foam.
Specific hazards arising from the chemical
Combustible material. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 2	**Instability** 3
HMIS	**Health** 3	**Flammability** 2	**Instability** 3

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for Cleaning Up Pick up and transfer to properly labeled containers.
Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Keep away from open flames, hot surfaces and sources of ignition. Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.
Storage Keep away from heat and sources of ignition. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Temperature	**Minimum**	40 °F / 4 °C		**Maximum**	90 °F / 32 °C		
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**		**Refrigerated**	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
4-(2-Nitrobutyl)morpholine	No data available	No data available	No data available
Methylene dimorpholine	No data available	No data available	No data available
Morpholine	TWA: 20 ppm Skin	TWA: 20 ppm TWA: 70 mg/m^3 Skin	IDLH: 1400 ppm STEL 30 ppm STEL 105 mg/m^3 TWA: 20 ppm TWA: 70 mg/m^3
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	No data available	No data available	No data available
1-Nitropropane	TWA: 25 ppm	TWA: 25 ppm TWA: 90 mg/m^3	IDLH: 1000 ppm TWA: 25 ppm TWA: 90 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment
Eye/Face Protection Tightly fitting safety goggles. Face-shield.
Skin Protection Wear suitable protective clothing, Impervious gloves.
Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Slight Viscous
Color	Yellow - Brown	**Odor**	Ammonia

Appearance	Transparent	**pH**	10
Specific Gravity	1.1	**Evaporation Rate**	No data available
Percent Volatile (Volume)	100	**VOC Content (%)**	100
VOC Content (g/L)	1100	**Vapor Pressure**	>0.1 mmHg @ 70°F
Vapor Density	No information available	**Solubility**	Slight
Boiling Point/Range	347 °F / 175 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Keep away from open flames, hot surfaces, and sources of ignition, Extremes of temperature and direct sunlight, To avoid thermal decomposition, do not overheat.

Incompatible Products Oxidizing agents, Acids.

Decomposition Temperature 212 °F / 100 °C

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Formaldehyde.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

Acute Toxicity

LD50 Oral	LD50 Dermal	LC50 Inhalation
rat 620 mg/kg	rabbit 420 mg/kg	> 2.33 mg/L

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
4-(2-Nitrobutyl)morpholine	no data available	no data available	no data available	no data available	no data available
Methylene dimorpholine	no data available	no data available	no data available	no data available	no data available
Morpholine	= 1050 mg/kg (Rat)	= 310 mg/kg (Rabbit)	= 8000 ppm (Rat) 8 h	no data available	no data available
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	no data available	no data available	no data available	no data available	no data available
1-Nitropropane	no data available	> 2000 mg/kg (Rabbit)	= 11.02 mg/L (Rat) 1 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
4-(2-Nitrobutyl)morpholine	no data available	no data available	no data available	no data available	no data available
Methylene dimorpholine	no data available	no data available	no data available	no data available	no data available
Morpholine	no data available	no data available	no data available	no data available	eyes, kidneys, liver, respiratory system, skin, CNS
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	no data available	no data available	no data available	no data available	no data available
1-Nitropropane	no data available	no data available	no data available	no data available	CNS,eyes,liver,kidneys

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
4-(2-Nitrobutyl)morpholine	not applicable	not applicable	not applicable	not applicable	not applicable
Methylene dimorpholine	not applicable	not applicable	not applicable	not applicable	not applicable
Morpholine	not applicable	not applicable	not applicable	not applicable	not applicable
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	not applicable	not applicable	not applicable	not applicable	not applicable
1-Nitropropane	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

Toxicity to algae	Toxicity to fish	Daphnia magna (Water flea)
EC50 0.35 mg/L 96 h	LC50 2.3 mg/L 96h	EC50 3.23 mg/L 72 h

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
4-(2-Nitrobutyl)morpholine	no data available	no data available	no data available	no data available	N/A
Methylene dimorpholine	no data available	no data available	no data available	no data available	N/A
Morpholine	EC50 = 28 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 350 mg/L Lepomis macrochirus 96 h LC50 375 - 460 mg/L Oncorhynchus	EC50 = 57.0 mg/L 30 min	EC50= 100 mg/L 24 h	-2.55

		mykiss 96 h LC50 > 1000 mg/L Brachydanio rerio 96 h			
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	no data available	no data available	no data available	no data available	N/A
1-Nitropropane	EC50 = 98 mg/L Desmodesmus subspicatus 72 h	LC50 = 205 mg/L Brachydanio rerio 48 h	EC50 = 42.8 mg/L 5 min EC50 = 45.4 mg/L 15 min EC50 = 50.8 mg/L 30 min	EC50= 258 mg/L 24 h	0.851

Persistence and Degradability Readily biodegradable.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Disinfectants, liquid, toxic, n.o.s.
Hazard Class 6.1
UN-No UN3142
Packing Group III
Description Disinfectants, liquid, toxic, n.o.s.(4-(2-Nitrobutyl)-Morpholine),6.1,UN3142,PG III

TDG

Proper shipping name Disinfectant, liquid, toxic, n.o.s.
Hazard Class 6.1
UN-No UN3142
Packing Group III
Description DISINFECTANT, LIQUID, TOXIC, N.O.S.(4-(2-Nitrobutyl)-Morpholine),6.1,UN3142,PG III

ICAO

UN-No UN3142
Proper Shipping Name Disinfectant, liquid, toxic, n.o.s.*
Hazard Class 6.1
Packing Group III
Shipping Description Disinfectant, liquid, toxic, n.o.s.*(4-(2-Nitrobutyl)-Morpholine),6.1,UN3142,PG III

IATA

UN-No UN3142
Proper Shipping Name Disinfectant, liquid, toxic, n.o.s.*
Hazard Class 6.1
Packing Group III
ERG Code 6L
Shipping Description UN3142,Disinfectant, liquid, toxic, n.o.s.*(4-(2-Nitrobutyl)-Morpholine),6.1,PG III

IMDG/IMO

Proper Shipping Name Disinfectant, liquid, toxic, n.o.s.
Hazard Class 6.1
UN-No UN3142
Packing Group III
EmS No. F-A, S-A
Shipping Description UN3142, Disinfectant, liquid, toxic, n.o.s.(4-(2-Nitrobutyl)-Morpholine),6.1,PG III

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
4-(2-Nitrobutyl)morpholine	Not applicable	Not applicable
Methylene dimorpholine	Not applicable	Not applicable
Morpholine	Not applicable	Not applicable
4,4'-(2-Ethyl-2-nitropropane-1,3-diyl)bismorpholine	Not applicable	Not applicable
1-Nitropropane	Not applicable	Not applicable

Canada

This product may not be commercially placed on the market in Canada.

WHMIS Hazard Class

Not applicable

16. OTHER INFORMATION

Prepared By Rachael Mohochi
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Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

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