

SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade Name: Norchem TC 588
Product Synonyms:
Recommended Use: Tank Cleaner

Company Identification: Goldcrest International Singapore Pte Ltd
38 Tech Park Crescent
Singapore 638098

Emergency phone number: (65) 6862 6006 Tel
(65) 6863 3665 Fax

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

PHYSICAL HAZARDS:

Flammable Liquids Category 4

HEALTH HAZARDS:

Acute Toxicity (Oral) - Category 5

Acute Toxicity (Dermal) - Category 5

Acute toxicity (inhalation - Gases) - Category 4

Skin corrosion - Category 2

Serious eye damage/eye irritation – Category 2

Carcinogenicity - Category 2

STOT (Single Exposure) Category 3

STOT (Repeat Exposure) - Category 2

Aspiration Hazard - Category 1

ENVIRONMENT

Chronic aquatic toxicant - Category 2

2.2 GHS Label elements, including precautionary statements

PICTOGRAM



SIGNAL WORD

Danger

PHYSICAL HAZARDS:

H227 Combustible liquid

HEALTH HAZARDS:

H303 May be harmful if swallowed

H313 May be harmful in contact with skin

H332 Harmful if inhaled

H315 Causes skin irritation

H319 Causes serious eye irritation

H351 Suspected of causing cancer

H336 May cause drowsiness or dizziness

H373 May cause damage to organs

H304 May be fatal if swallowed and enters airways

ENVIRONMENTAL HAZARDS

H411 Toxic to aquatic life with long lasting effects

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection

P271 Use only outdoors or in a well-ventilated area.

P264 Wash ... thoroughly after handling.

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
 P331 Do NOT induce vomiting.
 P273 Avoid release to the environment. – if this is not the intended use.

Response

P370 + P378 In case of fire: Use ... to extinguish. – if water increases risk.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER/doctor/...if you feel unwell.
 P302 + P352 IF ON SKIN: Wash with plenty water/...
 P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction.
 P332 + P313 If skin irritation occurs: Get medical advice/attention. – may be omitted when P333+P313 appears on the label
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P308 + P313 IF exposed or concerned: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P391 Collect spillage.

Storage

P405 Store locked up.
 P403 + P233 Store in a well-ventilated place.
 Keep container tightly closed. – if the chemical is volatile and may generate a hazardous atmosphere.

Disposal

P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Identity	3.2 Common Name/Synonyms	3.3 CAS No.	% Range
Fuels, diesel	Fuels, diesel	68334-30-5	Balance
Solvent Naptha	(Petroleum), Heavy Aromatic	64742-94-5	< 30 %
Nonylphenol polyethylene glycol ether	-	127087-87-0	< 20 %
Naphthalene	-	91-20-3	< 0.03 %

4. FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures general

Check the vital functions. Unconscious: maintain adequate airway and respiration.
 Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation.
 Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised.
 Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up).
 Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain.
 Depending on the victim's condition: Send to doctor/hospital.

First-aid measures after inhalation

If combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested.
 Prostheses (false teeth) may block airway should be removed where possible, prior to initiating first aid procedures.
 Apply artificial respiration if not breathing, preferably with a demand valve resuscitator or bag-valve mask device.
 Perform CPR if necessary. Transport to hospital, or doctor, without delay.
 Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis. Probable mucosal damage may contraindicate the use of gastric lavage

First-aid measures after skin contact

When contact skin or hair: Immediately flush body and clothes with large amounts of water.
 Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water.
 Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor

First-aid measures after eye contact

When in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water.
 Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by

occasionally lifting the upper and lower lids. Continue flushing for at least 15 minutes.

Transport to hospital or doctor without delay. Removal of contact lenses only be undertaken by skilled personnel.

First-aid measures after ingestion

For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely needed.

If swallowed do NOT induce vomiting.

If vomiting occurs, lean patient forward or place on left side to maintain open airway and prevent aspiration.

Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or becoming unconscious.

Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Transport to hospital or doctor without delay

4.2. Most important symptoms and effects, both acute and delayed

Nil

4.3. Indication of any immediate medical attention and special treatment needed

Nil

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Water spray or fog. Foam (Alcohol-resistant foam). Dry chemical powder. Carbon dioxide.

Unsuitable Do not use direct water jet..

5.2. Special hazards arising from the substance or mixture

Fire hazard Prevent runoff from fire fighting or dilution from entering drains or water courses.
Smoke, fume and incomplete combustion products, oxides of carbon are generated during a fire emergency.

Unusual Fire and Explosion Hazards Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

5.3. Special protective actions for fire-fighters

Precautionary measures fire Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation.

Exposure to fire/heat: seal off low-lying areas.

Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions Dilute toxic gases with water spray. Take account of toxic fire-fighting water.

Protection Use water moderately and if possible collect or contain it.

Heat/fire exposure: compressed air/oxygen apparatus during firefighting

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment Gloves. Face-shield. Corrosion-proof suit.

Large spills/in enclosed spaces: compressed air apparatus, gas-tight suit.

Reactivity hazard: compressed air/oxygen apparatus, gas-tight suit.

Emergency procedures Mark the danger area. No naked flames.

In case of hazardous reactions: keep upwind.

In case of reactivity hazard: consider evacuation.

Large spills/in confined spaces: consider evacuation.

6.1.2. For emergency responders

Protective equipment Equip cleanup crew with proper protection.

Emergency procedures Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Protective Measures:

Eliminate all sources of ignition in the vicinity of the spill or released vapor.

If this material is released into the work area, evacuate the area immediately.

Monitor area with combustible gas indicator.

Spill Management:

Stop the source of the release if you can do it without risk.

Contain release to prevent further contamination of soil, surface water or groundwater.

Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection.

Use appropriate techniques such as applying non-combustible absorbent materials or pumping.

All equipment used when handling the product must be grounded.

A vapor suppressing foam may be used to reduce vapors.

Use clean non-sparking tools to collect absorbed material.

Where feasible and appropriate, remove contaminated soil.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Safe handling

- Wear protective clothing when risk of exposure occurs. Avoid contact with skin and eyes.
- Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials.
- Material can accumulate static charges which may cause an electric spark. Use in a well-ventilated area.
- Use bonding/earthing however may not eliminate the hazard from static accumulated. Consult local standards.
- When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use.
- Avoid physical damage to containers. Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.

Advice on protection against fire and explosion

- Use explosion-proof equipment. Provide sufficient air exchange and/or exhaust in work rooms. Keep away from open flames, hot surfaces and sources of ignition.
- Empty bulk container may contain residual liquid and vapour which may ignite in the present of an electric spark.

Other information

- Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.
- WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

7.2 Conditions for safe storage, including any incompatibilities

Suitable container

- Suitable storage material and coatings: Carbon steel, stainless steel, polyester, Trron and polyvinyl alcohol (PVA).
 - Electrostatic charge may accumulate and create a hazardous condition when handling this material.
 - To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient.
 - Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
- General Storage Information:

- DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces.
- USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

Storage incompatibility

- Unsuitable material: Butyl rubber, Natural rubber, EPDM, Polystyrene, Polyacrylonitrile.
- Container is not designed to contain pressure.
- Do not use pressure to empty container or it may rupture with explosive force.
- Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous.
- Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death.
- Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

8.1 Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

Component	Source	TWA	STEL	Ceiling	Notation
Kerosine	ACGIH	200 mg/m3	--	--	Skin A3 Total hydrocabon vapor
Fuels, diesel	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon

8.2 Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. An approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing

Hand protection The type of gloves suitable for this material include chemical resistant gloves: Nitrile. Gloves suitability will depend on breakthrough time and conditions of use, may vary from supplier to supplier. Contact your nearest manufacturer for specific advice on glove selection.

Eye protection Face shield, goggles

Skin and body protection Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

Respiratory protection Respiratory protection: Suitable respiratory equipment: Approved respirators according to regulatory requirements if applicable. Type A filter material with half face filter respirator. If air quality falls below air purifying filter requirements, or if high airborne concentrations exist, use an approved supplied-air respirators operate in positive pressure mode or a self contained breathing apparatus is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

PHYSICAL PROPERTIES

Appearance:	Physical State	Liquid
	Colour	Colorless to faint pink
Odour		Sharp odor
Odour threshold;		Not available
pH (100%)		Not available
Melting Point:		- 40.5 deg°C
Boiling Point:		Not available
Flash point:		65°C
Evaporation Rate:		Not available
Flammability (solid, gas);		Not available
Flammable Limits (Approximate volume % in air): LEL & UEL:		Not available
Vapour Pressure:		1 mm Hg @40C
Vapour density:		Not available
Specific Gravity		0.82 - 0.87
Solubility In Water		Miscible in water.
Partition coefficient: n-octanol/water;		Not available
Auto-ignition temperature:		Not available
Decomposition Temperature:		Not available
Viscosity		Not available

9.2 Other information

Not available

10. STABILITY AND REACTIVITY

10.1 Reactivity	No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability	Material is stable under normal conditions.
10.3 Hazardous Reaction	Possibility of hazardous reactions : Will not occur.
10.4 Conditions To Avoid	Heat, open flames and high energy ignition sources.
10.5 Incompatible Materials	May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
10.6 Hazardous Decomposition Products	None known

11. TOXICOLOGICAL INFORMATION

11.1 Toxicological information

Category	4	Ingredients
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Diesel 68334-30-5	Solvent Naptha 64742-94-5 Naphthalene 91-20-3	Nonylphenol polyethylene glycol ether 8 127087-87-0	Nonylphenol polyethylene glycol ether 4 127087-87-0
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Acute toxicity	Category	4	Not Classified	Category	4	Category	4
Oral LD50 : mg/kg	rat	> 4000	> 6000	rat	960-3980	rat	2000-5840
Dermal LD50 mg/kg	rabbit	> 5000	> 2000	rabbit	2000-2991	rabbit	2573
Inhalation LC50 g/m3	rat	> 5000	No Data	rat 4h	1.150	No Data	No Data

Mixture : TC 588

Skin corrosion / irritation	Corrosion Category 2
Serious eye damage / eye irritation	Serious eye damage/eye irritation – Category 2
Sensitization	
Dermal	Not classified
Inhalation	Not classified
Germ cell mutagenicity;	Not classified
Carcinogenicity;	Category 2
Reproductive toxicity;	Not classified
STOT-single exposure;	Category 3
STOT-repeated exposure;	Category 2
Aspiration hazard	Category 1
Potential health effects	
Inhalation	Vapour concentrations above the recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects.
Ingestion	Harmful if swallowed. Causes burns, May cause damage to organs. Liquid aspirated into the lungs may cause chemical pneumonitis or pulmonary edema.
Skin	May be harmful if absorbed through skin. Prolong and/or repeated skin contact may defat the skin resulting in possible irritation and dermatitis.
Eyes	Causes serious eye damage

Contains: Naphthalene: Exposure to high concentration of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

		Ingredients			
		* + Diesel 68334-30-5	+ Solvent Naptha 64742-94-5 Naphthalene 91-20-3	Nonylphenol polyethylene glycol ether 8 127087-87-0	Nonylphenol polyethylene glycol ether 4 127087-87-0
Aquatic toxicity					
Acute		Not Classified	Not Classified	Not Classified	Not Classified
Chronic		Category 2	Not Classified	Not Classified	Category 2
Fish				fathead	fathead
LC50		No data	No data	minnow,	minnow,
(h) (d)	mg/l	available	available	96 h	96 h
, pH				3.8 - 6.2	1.2 - 9.3
Crustacea					
LC50		No data	No data	No data	No data
(h)		available	available	available	available
mg/l					
Invertebrate				Daphnia	Daphnia
EC50	(h)	No data	No data	magna	magna
mg/l		available	available	48 h	48 h
				9.3 - 21.4	1.3 - 10
Micro-organisms				bacteria	bacteria
IC50 (h)		No data	No data	16 h	16 h
mg/l		available	available	> 1,000	> 1,000

* The product has not been tested.

* The statement has been derived from products of a similar structure and composition.

+ This material is expected to be toxic to aquatic organisms.

Naphthalene Acute aquatic toxicity : LC 50 > 0.1 - 1 mg/L

12.2 Persistence and degradability: Biodegradability

No data available

12.3 Bioaccumulative potential: Bioaccumulation

No data available

12.4 Mobility in soil: Distribution among environment compartments

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects: Additional ecological information

Do not allow to enter soil, waterways or waste water channels. Do not release untreated into natural waters.

13. DISPOSAL CONSIDERATION

13.1 Disposal methods

Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal.

If disposal is necessary, do not dispose into sewage. Consult local, state and federal regulations.

For the safety of persons conducting disposal, recycling or reclamation activities, please refer to Section 8.

Disposed of by approved facilities or licence waste collector. Observe all local and national regulations.

Empty Container Warning (where applicable):

Empty containers may contain residue and can be dangerous. Return to supplier for reuse/ recycling if possible.

Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed

Observe all label safeguards until containers are cleaned and destroyed.

14. TRANSPORT INFORMATION

	<i>ADR, RID, ADN</i>	<i>IMDG</i>	<i>IATA</i>
14.1 UN number	UN 3082	UN 3082	UN 3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (DIESEL FUEL, KEROSENE, Naphthelene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (DIESEL FUEL, KEROSENE, Naphthelene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (DIESEL FUEL, KEROSENE, Naphthelene)
14.3 Transport hazard class(es)	9	9	9
14.4 Packaging group	III	III	III
14.5 Environmental hazards	Yes	Marine pollutant: Yes	Yes
14.6 Special precautions for user		No Information	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.			No information available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Ingredients

	Diesel 68334-30-5	Solvent Naptha 64742-94-5	Nonylphenol polyethylene glycol ether 8 127087-87-0	Nonylphenol polyethylene glycol ether 4 127087-87-0
Ingredients are on the inventory				
TSCA	Yes	Yes	Yes	No Info.
DSL	Yes	Yes	No Info.	No Info.
EINECS	Yes	No Info.	Yes	No Info.
AICS	Yes	Yes	No Info.	No Info.
ISHL	No Info.	No Info.	No Info.	No Info.
KECI	Yes	Yes	No Info.	No Info.
IECSC	Yes	Yes	No Info.	No Info.
NZIoC:	No Info.	No Info.	No Info.	No Info.
PICCS	No Info.	Yes	No Info.	No Info.
NEA	No Info.	No Info.	No Info.	No Info.

Mixture : SD 569

Montreal Protocol	Not Listed
Stockholm Convention	Not Listed
Rotterdam Convention	Not Listed

16. OTHER INFORMATION

Goldcrest International Pte. Ltd. provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Goldcrest International warrants that this product is of merchantable quality. The implied warranty of fitness for a purpose or use described on the product's label or in any written instructions or

quality. The implied warranty of fitness for a purpose or uses described on the product's label or in any written instructions or materials distributed to the buyer by Goldcrest International and is hereby disclaimed should buyer use the products in a manner inconsistent with this uses or purposes described therein. In no event shall Goldcrest International Pte. Ltd. be liable for any consequential, exemplary, or incidental damages incurred by buyer even if it has been advised of the possibility of such damages.

Key or legend to abbreviations and acronyms used in the safety data sheet

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures OSHA

STEL = Short Term Exposure Limits are based on 15-minute exposures

TSCA	United States TSCA Inventory
DSL	Canadian Domestic Substances List
EINECS	European Inventory of Existing Commercial Chemical Substances
AICS	Australia Inventory of Chemical Substances
ISHL	Japan - Inventory of Chemical Substances
KECI	Korean Existing Chemicals Inventory
IECSC	Inventory of Existing Chemical Substances in China
NZIoC:	New Zealand. Inventory of Chemical Substances
PICCS	Philippines Inventory of Chemicals and Chemical Substances
NEA	Singapore - National Environment Agency

Date Issued: 15 Jun 2016

This Safety Data Sheet was prepared in accordance to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 2013)

End of Safety Data Sheet