

SAFETY DATA SHEET**Date of Issue: 25 May 2018****1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Trade Name: Norchem OSD 570
Product Synonyms: Solvent Base Oil Spill Dispersant
Recommended Use: Dispersant for Oil Spills, Rig Wash, Deck Wash.
Company Identification: Goldcrest International Singapore Pte Ltd
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Singapore 638098
Emergency phone number: (65) 6862 6006 Tel
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2. HAZARDS IDENTIFICATION**GHS CLASSIFICATION**

PHYSICAL HAZARDS:

Flammable liquid: Category 4.

HEALTH HAZARDS:

Acute inhalation toxicant: Category 4.

Aspiration toxicant: Category 1.

Target organ toxicant (repeated exposure): Category 2.

Skin irritation: Category 2.

GHS LABEL

PICTOGRAM



Danger



Warning

SIGNAL WORD

GHS STATEMENT

PHYSICAL HAZARDS:

H227: Combustible liquid.

HEALTH HAZARDS:

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H332: Harmful if inhaled.

H351: Suspected of causing cancer.

H373: May cause damage to organs through prolonged or repeated exposure.

Prevention

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P260: Do not breathe mist / vapours.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash skin thoroughly after handling.

P271: Use only outdoors or in well ventilated area.

P273: Avoid release to the environment.

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

P281: Use personal protective equipment as required.

Response

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P331: Do NOT induce vomiting.

P332+P313: If skin irritation occurs: Get medical advice / attention.
P362: Take off contaminated clothing and wash before reuse.
P370+P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) for extinction.
P391: Collect spillage.

Storage

P403+P235: Store in well-ventilated place. Keep cool.

P405: Store locked up.

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

Chemical Identity	Common Name/Synonyms	CAS No.	% Range
Refined Petroleum Distillates	-	CAS No. 68334-30-5	Balance
Surfactant	-	* Proprietary	< 10 %
Naphthalene	-	CAS No. 91-20-3	< 0.1 %

* Confidential Business Information

4. FIRST AID MEASURES

General Advice

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Remove contaminated clothing, shoes and ignition sources without delay.

Laundry contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered.

For those providing assistance avoid exposure to yourself or others.

Use adequate respiratory protection, chemical resistance gloves, boots, goggles, coveralls.

Inhalation

Seek immediate medical assistance if respiratory irritation, dizziness, nausea, or unconsciousness occurs.

If breathing has stopped assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin Contact

Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water.

Get medical attention if pain or irritation persists after washing

Eye Contact

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

Do not induce vomiting. Seek immediate medical attention.

Most important symptoms/effects, acute and delayed

Contains hydrocarbon solvent/petroleum hydrocarbons; skin contact may aggravate an existing dermatitis.

Indication of any immediate medical attention and special treatment needed

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

5. FIRE-FIGHTING MEASURES

Appropriate Extinguishing Media: Water fog, foam, dry chemical or carbon dioxide (CO₂).

Inappropriate Extinguishing Media: Straight streams of water.

Advice for firefighters

Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

Fire-fighters should use standard protective equipment and in enclosed spaces, self contained breathing apparatus (SCBA).

Use water spray (Fog) to cool fire exposed surfaces and to protect personnel.

Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulphur oxides, Incomplete combustion products, Oxide of Carbon.

6. ACCIDENTAL RELEASE MEASURES

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Personal Precautions, protective equipment and emergency procedures:

Stay upwind & avoid contact with spilled material. See Section 8 for advice on the minimum requirements for PPE.

Additional protective measures, depending on circumstances and the emergency responder's expert judgment.

Removed ignition sources, due to toxicity or flammability of the material. See Section 5 for fire fighting information.

Warn occupants in surrounding and downwind areas or evacuate if required,

Hazard identification Section for Significant Hazards. See Section 4 for First Aid Advice.

For emergency responders:

Respiratory protection: half-face or full-face respirator with filter(s) for organic vapour and when applicable, H₂S,

If an oxygen deficient atmosphere is possible or anticipated, Self Contained Breathing Apparatus is recommended.

Work gloves that are resistant to aromatic hydrocarbons are recommended.

Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use.

Chemical goggles are recommended if splashes or contact with eyes is possible.

Small spills: normal antistatic work clothes are usually adequate.

Large spills full body suit of chemical resistant, antistatic material is recommended.

Environmental precautions

Contain spill by bunding, prevent entry into waterways or sewer by covering and transfer to container for waste treatment later.

Methods and materials for containment and cleaning up

Land Spill: Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks or flames).

Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces.

A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material.

Small Spills: Absorb with sand or other non-combustible material and transfer to containers for waste treatment later.

Surfaces may be clean by mopping with water.

All equipment used when handling the product must be of non-sparking type and/or grounded.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms.

Warn other shipping. Remove from the surface by skimming or with suitable absorbents.

Water spill and land spill recommendations are based on the most likely spill scenario for this material;

however, geographic condition, wind, temperature, (and in the case of a water spill)

wave and current direction and speed may greatly influence the appropriate action to be taken.

For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

7. HANDLING AND STORAGE

Precautions for safe handling

Use Personal Protective Equipment when handling mixture. Handle in a well ventilated place.

Avoid all personal contact. Do not get in eyes, on skin, on clothing.

Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Ready spill containment equipment and absorbance material during handling to minimize release to the environment.

Conditions for safe storage, including any incompatibilities

Store in a cool ventilated area, Keep container closed at all times.

Store away from heat and ignition sources.

Store away from incompatible substances such as oxidizing agents.

Polymeric material compatibility varies check before use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source	Year
		TWA	5 mg/m ³				
Refined Petroleum Distillates	Stable Aerosol.	TWA	5 mg/m ³			ExxonMobil	2010
Refined Petroleum Distillates	Vapour.	TWA	200 mg/m ³			ExxonMobil	2010
Refined Petroleum Distillates (total hydrocarb, vapour & aerosol)	Inhalable fraction and vapour	TWA	100 mg/m ³		Skin	ACGIH	2010
NAPHTHALENE		STEL	79 mg/m ³	15 ppm		Singapore PELs	2006
NAPHTHALENE		TWA	52 mg/m ³	10ppm		Singapore PELs	2006
NAPHTHALENE		STEL	15 ppm		Skin	ACGIH	2010
NAPHTHALENE		TWA	10 ppm		Skin	ACGIH	2010

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The intended mode of use of the product (mixture) is on the open environment (sea).

Control measures to consider: Not Applicable.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended. normal usage.

Respiratory Protection:

Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Type A filter material. Type P filter material.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged glove.

The types of gloves to be considered for this material include: Chemical resistant gloves are recommended.

If contact with forearms is likely wear gauntlet style gloves. Nitrile, Viton

Eye Protection: Wear chemical splash protection goggles.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Appearance:	Physical State	Liquid
	Colour	Straw to Amber
Odour		Solvent
Odour threshold;		Not available
pH (100%)		Not available
Melting Point:		Not available
Boiling Point:		Not available
Flash point:		>86°C (186°F)
Evaporation Rate:		Not available
Flammability (solid, gas);		Not applicable
Flammable Limits (Approximate volume % In air): LEL & UEL:		Not available

Vapour Pressure:	Not available
Vapour density:	Not available
Density	At 25°C 0.86 - 0.87 (g/ml)
Solubility In Water	Insoluble
Partition coefficient: n-octanol/water;	Not available
Auto-ignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity	10 mPa.s @ 25°C

10. STABILITY AND REACTIVITY

Reactivity	No known reactivity hazard
Chemical Stability	Stable under normal conditions.
Hazardous Reaction	No known Hazardous Reaction or Polymerization
Conditions To Avoid	Heat, open flames and high energy ignition sources.
Incompatible Materials	Halogens, Strong Acids, Strong Bases, Oxidisers.
Hazardous Decomposition Products	Under fire conditions: Oxides of carbon, Oxides of sulphur

11. TOXICOLOGICAL INFORMATION

INGREDIENT TOXICITY INFORMATION

	Sodium Dioctyl Sulfosuccinate	Refined Petroleum Distillates
Acute toxicity		
Oral	Rat LD50 >5000 mg/kg	Rat LD50 > 5000 mg/kg *
Dermal	Rabbit LD50 >2000 mg/kg	Rabbit LD50 > 5000 mg/kg * ⁽⁵⁾
Inhalation	Rat LC50 4 hr. >20,000 mg/m ³	Rat LC50 > 4000 mg/m ³ ** ⁽⁶⁾
Skin corrosion/irritation	Irritant Category 2 ⁽¹⁾	Irritation Category 2 ⁽¹⁰⁾
Serious eye damage /eye irritation	Eye irritation. Category 2A ⁽²⁾	Eye irritation. Category 2A ⁽⁷⁾
Sensitization		
Dermal	Not sensitizing ⁽³⁾	Irritation ⁽¹⁰⁾
Inhalation	Not Available	Irritation ⁽¹¹⁾
Germ cell mutagenicity;	Not mutagenic	Caused mutations in-vitro.
Carcinogenicity;	Not Available	Carcinogenic in animal tests.
Reproductive toxicity;	No adverse effect ⁽⁴⁾	Litter size & weight, fetal resorptions ⁽⁹⁾
STOT-single exposure;	Not Available	Not Available
STOT-repeated exposure;	Not Available	Not Available
Aspiration hazard	Not Available	Aspiration toxicant: Category 1. ⁽⁸⁾

HAZARDOUS INGREDIENT TOXICITY DATA

Sodium Dioctyl Sulfosuccinate

Sodium Dioctyl Sulfosuccinate (DSS) has an average oral (rat) LD50 of 3.1 g/kg, based on measured values of 1.9 g/kg, 3.08 g/kg, and 4.3 g/kg. The dermal (rabbit) LD50 is >10 g/kg.

DSS has caused moderate skin and eye irritation in animals, to varying extents, depending on the formulation of the tested material (e.g. solid vs. solution), the tested concentration, and the exposure duration.

Following 24-hour dermal application (rabbits) of 8 - 10 g/kg solid DSS, the only effect observed was mild erythema.

⁽¹⁾ In other rabbit skin irritation tests, the primary irritation score for 100% DSS was ~ 4 and that for 80% DSS with propylene glycol was ~3, both resulting in a moderate irritant classification.

⁽²⁾ Solid DSS applied to the eyes of rabbits produced moderate irritation.

Solutions of DSS appear to cause irritation at lower concentrations than the solid material.

In rabbits, a concentration of 1% was the lowest reported effective dose necessary to produce slight dermal erythema and at concentrations from 5 - 25% moderate dermal irritation occurred.

Mild eye irritation in rabbits occurred following treatment with concentrations between 0.1 and 0.5% DSS.

⁽³⁾ Humans appear to be less sensitive to DSS for skin irritation. In humans, a concentration of 1% was the highest

no-effect level observed for skin irritation following a 24-hr patch test. In a modified Draize-Shelanski repeat-insult patch test, DSS showed little evidence of irritation and no evidence of eliciting an allergic response in human subjects. Results from a 90-day subacute oral diet (rat) study indicate a NOEL of 0.94 g/kg/day and results from a 6-month subchronic oral diet (rat) study indicate a LOEL of 0.87 g/kg/day.

No indication of significant gross or microscopic adverse effects were reported.

This material was not mutagenic in the Ames Assay. Chronic toxicity studies in rats (2-yr) and dogs (1-yr) also reported no significant adverse effects at the doses administered.

⁽⁴⁾ No adverse effect on reproductive function or fetal development were observed in rats treated with DSS at 0.5 and 1.0% doses, which were not maternally toxic.

Refined Petroleum Distillates

* Minimally Toxic. Based on test data for structurally similar materials.

⁽⁵⁾ May dry the skin leading to discomfort and dermatitis.

** Moderately toxic. Based on test data for structurally similar materials

⁽⁶⁾ Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

⁽⁷⁾ Vapour concentration above 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.

⁽⁸⁾ Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

⁽⁹⁾ Repeated dermal exposures to high concentrations in test animals resulted in reduced litter size and litter weight and increased fetal resorptions at maternally toxic doses.

⁽¹⁰⁾ Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality.

⁽¹¹⁾ Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation and reduction in lung function.

Contains:

An ingredient or ingredients that are classified as toxic to a specific target organ from a repeated exposure, NAPHTHALENE: Exposure to high concentrations 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.

IARC Classification: The following ingredients are cited on the list below:

Chemical Name	CAS Number	List Citations
NAPHTHALENE	91-20-3	3

REGULATORY LISTS SEARCHED

1=IARC 1

2=IARC 2A

3=IARC 2B

12. ECOLOGICAL INFORMATION

Norchem OSD 570 (Mixture)

Toxicity

FISH TEST RESULTS

Test: Acute toxicity, freshwater (AVA¹) Duration: 96 hr.

Species: Glass Fish (Chanda Gymocephalus)

> 100 mg/l LC50²

¹ Modified method from Environment Canada using Glass Fish as test organism.

² Toxicity test result 9/10 fishes survived

Persistence and degradability:

Biodegradability

Method: MPA/MV/III³ (modified from OECD)⁴

Testing period 8 days

> 90%

³ The Maritime and Port Authority of Singapore

⁴ based on anionic surface active agent.

Bioaccumulative potential: Bioaccumulation

No data available

Mobility in soil: Distribution among environment compartments

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects: Additional ecological information

No data available

13. DISPOSAL CONSIDERATION

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 the information in Section 8. The Company recommends that organic materials, especially when classified as combustible liquid, be 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.

Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.

DO NOT PRESSURISE, 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.

14. TRANSPORT INFORMATION

	<i>ADR, RID, ADN</i>	<i>IMDG</i>	<i>IATA</i>
UN Number:	Not Classified	Not Classified	Not Classified
UN Proper Shipping Name:	Not Classified	Not Classified	Not Classified
Transport Hazard Class:	Not Classified	Not Classified	Not Classified
Packing Group:	Not Applicable	Not Applicable	Not Applicable
Environmental Hazard	Not Classified	Not Classified	Not Classified

Special Precaution for use Product is a Combustible Liquid, keep away from heat source & open flames.
Flash point: >86°C (168°F) Closed Cup

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code. No Information

15. REGULATORY INFORMATION

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

National Regulations: Singapore:

First Schedule of the Prevention of Pollution of the Sea

(Oil Pollution Preparedness, response and Co-operation) Regulations 1999

16. OTHER INFORMATION

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