

Material Safety Data Sheet

Cleaning Solution 2 and 3

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cleaning Solution 2 (0.2% Triton X-100 Aqueous Solution), Cleaning Solution 3 (1% Triton X-100 Aqueous Solution).

Catalog Numbers: DP8858, DP8859.

Use: General purpose surfactant.

THERMO ELECTRON
189 - 199 Browns Rd
NOBLE PARK VIC 3174
AUSTRALIA
Tel: +61 3 9790 4100
Fax: +61 3 9790 4155
E-mail: info.clinicalchemistry@thermo.com

THERMO ELECTRON
331 South 104th Street
LOUISVILLE, CO 80027
U.S.A
Tel: (303) 581 6428
Fax: (303) 581 6429
E-mail: info.clinicalchemistry@thermo.com

Contact Point

Australia
Quality Assurance Manager:
Tel: +61 3 9790 4100
Mon – Fri 9:00am to 5:00pm

U.S.A
Chemtel
24 Hour Emergency Assistance
1-800-255-3924

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO EU CRITERIA

Hazard Classification: HAZARDOUS SUBSTANCE, DANGEROUS GOODS.

Hazard Category: Harmful (Xn), Irritant (Xi)

RISK PHRASES

R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.

SAFETY PHRASES

S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.

Poison Schedule: S5 [Aust]

This material is a Scheduled **S5** Poison and must be stored, handled and used according to the appropriate regulations.

Warning Statement:

Harmful if swallowed. Irritating to eyes and skin.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
POLYETHYLENE GLYCOL OCTYL PHENYL ETHER	> 97 %	9036-19-5
POLYETHYLENE GLYCOL	1 to < 5 %	88747-22-2

Carcinogenicity: This product may contain trace amounts of ethylene oxide and dioxane.

Ethylene Oxide: NOHSC considers this substance to be a potential occupational carcinogen. These quantities, however, are significantly lower than are required for reporting according to current legislation.

All other ingredients determined not to be hazardous according to the EU criteria.

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4. FIRST AID MEASURES

Swallowed: If swallowed, **DO NOT** induce vomiting. If victim is conscious give water to drink. Immediately transport to hospital or doctor.

Eye: If product enters the eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. Seek medical aid immediately.

Skin: If product contacts the skin, remove any contaminated clothing and wash skin thoroughly with water and soap. Immediately transport to hospital or doctor.

Inhaled: Move victim to fresh air. Apply resuscitation if victim is not breathing.

First Aid Facilities: Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor: Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

In Australia call Tel: 131126

In New Zealand Tel: 034747000

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing media suitable for surrounding fire situation.

Hazards from Combustion Products: Decomposes on heating emitting oxides of carbon, sulfur and nitrogen entities.

Precautions for Fire Fighters and Special Protective Equipment: If safe to do so, move undamaged containers from fire area. Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

Hazchem Code: None allocated [Aust].

Flammability: This material is a combustible liquid of extremely high flash point $> 250^{\circ}\text{C}$, unless exposed to extremely high temperatures and for prolonged periods this product is not anticipated to ignite nor to sustain combustion.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Keep unnecessary people away. Isolate hazard area and deny entry. If product spills onto floors it will represent a slip hazard, walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

Methods and Materials for Containment and Clean Up Procedures

Dike area using with an absorbent such as diatomaceous earth - to prevent run off into drains and waterways. Throw further absorbent (diatomaceous earth or other inert material) on top of spill, then shovel up and seal in properly labeled containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Provide adequate ventilation. Do not swallow. Avoid contact with skin and eyes.

Conditions for Safe Storage

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from strong mineral acids (sulfuric, nitric and hydrochloric), and oxidizing agents. Store at $2-25^{\circ}\text{C}$ and the reagent will be stable until the expiry date stated on the bottle and kit box labels. Keep containers tightly closed, when not using the product. Store in original packaging as approved by manufacturer.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards have been assigned by NOHSC to any of the components of the product.

Engineering Controls

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.

Personal Protection Equipment

Gloves: Not normally required, however, if handling large quantities or if the skin is likely to be exposed to this product over prolonged periods, then the use of PVC or natural rubber is recommended.

Eyes: Chemical glasses or face shield to protect eyes.

Respiratory Protection: Avoid breathing of vapours. The use of a respirator is not normally required, however, if entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. Select and use respirators in accordance with AS/NZS 1715/1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Transparent to pale yellow viscous liquid with mild odour.
Boiling Point:	> 200°C
Melting Point:	6°C
Vapour Pressure:	< 0.01 mmHg @ 20°C
Specific Gravity:	1.067
Flash Point:	251°C
Flammability Limits:	Not available
Solubility in Water:	Completely soluble

Other Properties

pH: 7 (5 % solution)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of use. Viscosity increases as temperature decreases and handling becomes difficult below 20°C.

Conditions to Avoid: High temperatures and mixing with incompatibles.

Incompatible Materials: Strong mineral acids (sulfuric, nitric and hydrochloric), and oxidizing agents. Corrosive to copper and brass.

Hazardous Decomposition Products: Decomposes on heating emitting oxides of carbon and noxious smoke.

Hazardous Reactions: Will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected, if the product is handled in accordance with this Material Safety Data Sheet and the product label. Symptoms and effects that may arise if the product is mishandled or overexposure occurs are:

Acute Health Effects

Swallowed: Harmful if swallowed. May cause irritation to mouth, throat and stomach with effects including pains in the stomach, which may lead to nausea, vomiting and diarrhoea.

Eye: Will cause irritation to the eyes with effects including: tearing, pain, stinging and blurred vision.

Skin: Will cause irritation to the skin, with effects including; redness and itchiness and drying/defatting

Inhaled: May cause irritation to the nose, throat and respiratory system.

Chronic: Prolonged or repeated skin contact may lead to dermatitis. Prolonged contact may cause severe eye irritation and some form of permanent eye damage may occur.

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11. TOXICOLOGICAL INFORMATION

The following toxicological information is available for this product:

Triton X-100:

Oral LD50(rat): 1,800 mg/kg. (Mixture as whole)

Polveethylene glycol octylphenyl ether:

Oral LD50(rat): 4,190 mg/kg;

Irritation:(Std Draize, eye, rabbit) at a concentration of 1% was found to be severe. Investigated as a mutagen, inconclusive results.

Carcinogenicity: This product may contain trace amounts of ethylene oxide and dioxane.

Ethylene Oxide: NOHSC considers this substance to be a potential occupational carcinogen.

12. ECOLOGICAL INFORMATION

Triton X-100: The LC50/96-hour values for fish are between 1 and 10 mg/L, this material is therefore considered to be toxic to aquatic organisms. Avoid contaminating drains, sewers or waterways.

13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Dispose of material through a licensed waste contractor.

14. TRANSPORT INFORMATION

Road Transport

UN Number: None allocated

Proper Shipping Name: NONE ALLOCATED

Dangerous Goods Class: None allocated

Packing Group: None allocated

Label: Harmful (Xn), Irritant (Xi)

Air Transport

UN Number: None allocated

Proper Shipping Name: NONE ALLOCATED

Dangerous Goods Class: None allocated

Packing Group: None allocated

Label: Harmful (Xn), Irritant (Xi)

Sea Transport

UN Number: None allocated

Proper Shipping Name: NONE ALLOCATED

Dangerous Goods Class: None allocated

Packing Group: None allocated

Label: Harmful (Xn), Irritant (Xi)

15. REGULATORY INFORMATION

Poison Schedule: S5 [Aust]

This material is a Scheduled **S5** Poison and must be stored, handled and used according to the appropriate regulations.

Inventory Status:

Australia (AICS)	Y
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	Y

Y = all ingredients are on the inventory.

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16. OTHER INFORMATION

Issue date: March, 2005

Key Legend Information

NOHSC - National Occupational Health & Safety Commission [Aust]

SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons {Poison Schedule} [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances [Aust]

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. [Aust]

AS/NZS 1716 - Respiratory Protective Devices. [Aust]

Hazchem Code - Fire Fighter Designation [Aust]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization [Int]

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods [Int]

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the Classification and Labeling of Chemicals. [Int]

EU - European Union

TSCA - Toxic Substances Control Act [US]

DSL - Domestic Chemical List [Can]

EINECS - European Inventory of Existing Commercial Chemical Substances [Int]

ELINCS - Existing List of Notified Chemical Substances. [Int]

[Aust] = Australia

[Int] = International

[US] = United States of America

[Can] = Canada

Principal References:

Information supplied by manufacturer, reference sources including the public domain.

Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions which are available on request.

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END OF MSDS