



# SUMITOMO CHEMICAL

## SAFETY DATA SHEET

### DEET

According to Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, February 2016

#### SECTION 1: Identification: Product identifier and chemical identity

##### Product identifier

**Product name** DEET

**Chemical name** N,N-Diethyl-m-toluamide

##### Relevant identified uses of the substance or mixture and uses advised against

**Application** Repellent

**Uses advised against** No specific uses advised against are identified.

##### Details of the supplier of the safety data sheet

**Supplier** www.sumitomo-chem.com.au  
Sumitomo Chemical Australia Pty Ltd  
Level 5, 51 Rawson Street,  
EPPING, NSW 2121  
(02) 8752 9000  
(02) 8752 9099  
Reception@sumitomo-chem.com.au

##### Emergency telephone number

**Emergency telephone** 1800 024 973 (Australia) 0800 243 6225 (New Zealand)

#### SECTION 2: Hazard(s) identification

##### Classification of the substance or mixture

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319

**Environmental hazards** Aquatic Chronic 3 - H412

##### Label elements

##### Pictogram



**Signal word** Warning

**Hazard statements** H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P330 Rinse mouth.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash before reuse.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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**Contains** N,N-diethyl-m-toluamide

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition and information on ingredients

#### Mixtures

N,N-diethyl-m-toluamide	~ 100%
CAS number: 134-62-3	

### SECTION 4: First aid measures

#### Description of first aid measures

<b>General information</b>	If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126; New Zealand 0800 764 766), and follow the advice given. Show this Safety Data Sheet to a doctor.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention.
<b>Skin Contact</b>	Rinse immediately with plenty of water.
<b>Eye contact</b>	Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

#### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

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**Skin contact** Redness. Irritating to skin.

**Eye contact** Irritating to eyes.

### Indication of any immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically.

### SECTION 5: Firefighting measures

#### Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

#### Special hazards arising from the substance or mixture

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

#### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to Australia/New Zealand Standards AS/NZS 4967 (for clothing) AS/NZS 1801 (for helmets), AS/NZS 4821 (for protective boots), AS/NZS 1801 (for protective gloves) will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

#### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

#### Reference to other sections

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**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### SECTION 7: Handling and storage, including how the chemical may be safely used

#### Precautions for safe handling

**Usage precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

#### Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

#### Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1

### SECTION 8: Exposure controls and personal protection

#### Control parameters

#### Occupational exposure limits

#### **N,N-diethyl-m-toluamide**

No value assigned for this specific material by Safe Work Australia

#### Exposure controls

#### **Protective equipment**



**Appropriate engineering controls**

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection**

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Hand protection**

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with Australia/New Zealand Standard AS/NZS 2161. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

**Other skin and body protection**

Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Hygiene measures**

Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

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<b>Respiratory protection</b>	Ensure all respiratory protective equipment is suitable for its intended use and complies with Australia/New Zealand Standard AS/NZS 1716. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Full face mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Half mask and quarter mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Oily liquid.
<b>Colour</b>	Clear.
<b>Melting point</b>	- 43°C
<b>Initial boiling point and range</b>	284.2°C @ 1 atm
<b>Flash point</b>	144°C TCC (Tag closed cup).
<b>Evaporation rate</b>	< 1 (butyl acetate = 1)
<b>Vapour pressure</b>	0.0048 mm Hg @ 32.4°C
<b>Vapour density</b>	6.7
<b>Relative density</b>	0.998 @ 20°C
<b>Solubility(ies)</b>	11.2 mg/l water @ 25°C
<b>Partition coefficient</b>	Kow: 2.4
<b>Auto-ignition temperature</b>	>200°C
<b>Viscosity</b>	21.86 cSt @ 20°C

### SECTION 10: Stability and reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
<b>Hazardous decomposition products</b>	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

### SECTION 11: Toxicological information

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### Information on toxicological effects

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> = 1892 mg/kg, , Rat

### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> >5,000 mg/kg, , Rat

### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** LC<sub>50</sub> > 2.02 (highest attainable conc.) , , Rat, (4 h)

### Skin corrosion/irritation

**Animal data** Irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Irritating (Rabbit)

### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

### Skin sensitisation

**Skin sensitisation** Not sensitising. (Guinea pig)

### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

### **IARC carcinogenicity**

None of the ingredients are listed or exempt.

### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

### **Reproductive toxicity - development**

Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

### **General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

### **Inhalation**

No specific symptoms known.

### **Ingestion**

May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

### **Skin Contact**

Redness. Irritating to skin.

### **Eye contact**

Irritating to eyes.

### **Route of entry**

Ingestion Inhalation Skin and/or eye contact

### **Target Organs**

No specific target organs known.

## SECTION 12: Ecological Information

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**Toxicity** Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: 71.25 ppm, *Onchorhynchus mykiss* (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hour: = 77 ppm, *Daphnia magna*

**Acute toxicity - aquatic plants** NOEC, 72 hour: 8 mg/l, *Pseudokirchneriella subcapitata*

**Acute toxicity - terrestrial** LD<sub>50</sub>, : 1,375 mg/kg, *Colinus Virginianus* (Bobwhite Quail)

### Persistence and degradability

**Persistence and degradability** The product is readily biodegradable.

### Bioaccumulative potential

**Bioaccumulative Potential** Bioaccumulation is unlikely.

**Partition coefficient** Kow: 2.4

### Mobility in soil

**Mobility** No data available.

### Results of PBT and vPvB assessment

#### Other adverse effects

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

### Waste treatment methods

**General information** The generation of waste should be minimised or avoided wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods** Triple or preferably pressure rinse containers before disposal. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.  
If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

## SECTION 14: Transport information

**General** Not a dangerous good according to ADG code 7

### UN number

### UN proper shipping name

Insect repellent other than agricultural (DEET)

### Transport hazard class(es)

### Packing group

### Environmental hazards

### Special precautions for user

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### SECTION 15: Regulatory information

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Inventories

##### Australia - AICS

listed

### SECTION 16: Any other relevant information

<b>Training advice</b>	Only trained personnel should use this material.
<b>Revision date</b>	14/10/2016
<b>Revision</b>	1
<b>SDS No.</b>	4742
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.