



SAFETY DATA SHEET DEET

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 033 111 (Australia) 0800 734 607 (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

Hazard pictograms



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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Precautionary statements	<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 (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

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

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	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.
Ingestion	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.
Skin Contact	Rinse immediately with plenty of water.
Eye contact	Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

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.

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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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Respiratory protection	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.
Environmental exposure controls	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

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

SECTION 10: Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	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

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ = 1892 mg/kg, , Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >5,000 mg/kg, , Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ > 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 exposure

Ingestion Inhalation Skin and/or eye contact

Target Organs

No specific target organs known.

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SECTION 12: Ecological information

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

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 71.25 ppm, *Oncorhynchus mykiss* (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: = 77 ppm, *Daphnia magna*

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

Acute toxicity - terrestrial LD₅₀, : 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.

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 for transport by Road and Rail according to ADG 7 code

UN proper shipping name

Insect repellent other than agricultural (DEET)

SECTION 15: Regulatory information

Inventories

DEET

Australia - AICS

listed

SECTION 16: Any other relevant information

Training advice	Only trained personnel should use this material.
Revision date	29/06/2021
Revision	2
Supersedes date	14/10/2016
SDS No.	4742
Hazard statements in full	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.