

Safety Data Sheet

COMMISSION REGULATION (EU) NO 2015/830 OF 1st June 2015

Amending Annex II of Regulation EU No 453/2010

Revision No-07

Printing Date 25/08/2020

Product Name – DEET

Revision Date- 24/08/2020

1. Identification of the substance

1.1 Product Identifier

- **Product Name:** DEET (N,N Diethylmetatoluamide)
- **CAS No:** 134-62-3
- **EC No:** 205-149-7
- **REACH Registration/Pre-registration No:** Not applicable.
- **1.2 Relevant Identified Uses of the substance or mixture and uses advised against:** As mosquito repellent in skin ointment.

1.3 Details of the Supplier of the Safety Data Sheet

- **Manufacturer/supplier:**
Alkyl Amines Chemicals Ltd
401-407, Nirman Vyapar Kendra, Plot No-10
Sect-17, Vashi, Navi Mumbai
India – 400703
Emergency Contact no- +91 2117 235175 / 235222 **Mobile no -**+919423002721 / +919881973507
Emergency Contact No for US only- +1 703 527 3887 / 800 424 9300

e-mail Address of the competent Person responsible for Safety Data Sheet:

rsattigeri@alkylamines.com

Information Dept: R&D

1.4 Emergency Telephone Numbers : As mentioned above

2. Hazard Identification

2.1 Classification of Substance or Mixture

– Classification According to EC regulation 1272/2008



GHS07

Acute Tox. Oral cat 4 H302 Harmful if swallowed.

Skin Irrit. Cat 2 H315 Causes skin irritation.

Eye Irrit. Cat 2 H319 Causes serious eye irritation

Environmental Chronic cat 3 : H412 Harmful to aquatic life with long lasting effects.

2.2 Label Elements

- Labelling According to Regulation EC 1272/2008

The substance is classified according to CLP Regulation

Hazard Pictogram



GHS07

Signal Word- Warning

Hazard statements

H302 Harmful if swallowed.

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H315 Causes skin irritation.**H319** Causes serious eye irritation.**H412** Harmful to aquatic life with long lasting effect.**Precautionary statements****Prevention:****P280** Wear protective gloves/protective clothing/eye protection/face protection.**P270** Do not eat, drink or smoke when using this product.**Response:****P302+P352** If ON SKIN, wash with plenty of soap and water.**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P301+P312** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.**P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**P330** Rinse mouth.**P332+P313** If skin irritation occurs: Get medical advice/attention.**P337+P313** If eye irritation persists: Get medical advice/attention**Storage:****P403+P233** Store in a well-ventilated place. Keep container tightly closed.**Disposal:****P501** Dispose of contents in accordance with local/ regional/national/international regulation**-2.3 Other hazards**

Not applicable.

Results of PBT and vPvB assessment· **PBT:** Not applicable.· **vPvB:** Not applicable

3. Composition/Information on Ingredients

Description	CAS No	EC No	Content (% w/w)
N,N Diethylmetatoluamind	134-62-3	205-149-7	>99.5

Molecular Formula – C₁₂H₁₇NO**Molecular Wt-** 191.27 g/mole**Index No-**616-018-00-2

4. First- Aid Measures

--4.1 Description of first aid measures**- General information:**

Immediately remove any clothing contaminated by the product.

-After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms

Persist. In case of unconsciousness bring patient into stable side position for transport.

-After skin contact:

Wash with plenty of water. If skin irritation continues, consult a doctor.

- After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.**- After swallowing:**

Never give anything by mouth. Consult physician or contact poison centre.

- 4.2 Most important symptoms and effects, both acute and delayed May be harmful if ingested in sufficient quantities. Contact with skin may cause slight irritation. Moderately irritating to eyes. High gas, vapour, or mist concentrations may be harmful if inhaled.

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- 4.3 Indication of any immediate medical attention and special treatment needed*No further relevant information available.***5. Fire Fighting Measures****-5.1 Extinguishing media***-Suitable extinguishing agents Use fire fighting measures that suit the environment.**-For safety reasons unsuitable extinguishing agents none***-5.2 Special hazards arising from the substance or mixture***Nitrogen oxides (NO_x)**Carbon monoxide (CO) and Carbon dioxide (CO₂)***-5.3 Advice for fire-fighters***- Protective equipment: Wear self-contained breathing apparatus.***-Additional information***Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.***6. Accidental release Measures****- 6.1 Personal precautions, protective equipment and emergency procedures***Ensure adequate ventilation.**Do not breathe vapours or mist..**Avoid contact with skin and eyes.***- 6.2 Environmental precautions:** *Do not allow to enter drainage system, surface or ground water.***- 6.3 Methods and material for containment and cleaning up:***Collect mechanically.**Ensure adequate ventilation.**Dispose of the material collected according to regulations.***- 6.4 Reference to other sections***See Section 8 for information on personal protection equipment.***7. Handling and Storage****- 7.1 Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of dust.**Do not breathe vapours.**Avoid contact with skin and eyes.**Make sure that all applicable workplace limits are observed.***- Information about protection against explosions and fires:***Keep ignition sources away - Do not smoke.***- 7.2 Conditions for safe storage, including any incompatibilities****- Storage****- Requirements to be met by storerooms and containers:***Observe all local and national regulations for storage of water polluting products.***- Information about storage in one common storage facility:** *Not required.***- Further information about storage conditions:***Store under shade at ambient temperature (<45^oC) & dry conditions in well-sealed containers***-7.3 Specific end use(s)** *No further relevant information available.***8. Exposure Control/Personal Protection****- Additional information about design of technical systems:** *No further data; see item 7.***- 8.1 Control parameters****- Components with critical values that require monitoring at the workplace:** *Not required.***- Additional information:** *The lists that were valid during the compilation were used as basis*

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- 8.2 Exposure controls**- Personal protective equipment****- General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Do not eat, drink or smoke while working.

Instantly remove any contaminated garments.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes and skin.

Wash hands during breaks and at the end of the work.

- Breathing equipment:

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

- Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- Material of gloves

Butyl rubber

Recommended thickness of the material: ≥ 0.5 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove materialPenetration time: ≥ 8 hours

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be Observed.

Gloves of following material should not be used for more than 2 hrs.

Natural rubber (NR) , Thickness :0.5 mm

-Eye protection: Tightly sealed safety glasses**- Body protection:** Protective work clothing**9. Physical and Chemical Properties****-9.1 Information on basic Physical and Chemical Properties****General Information-**

Appearance/Physical state /colour	Colourless to light yellow liquid
Explosive limit Upper	No data available
Lower	
Odour	No specific odour
Vapour pressure	0.7Pa @ 20 °C
Odour Threshold	No data available
Vapour density	No data available
PH (10% in water)	No data available
Density	0.9960 g/cm ³ @ 20 °C
Melting point/freezing point	No data available
Solubility in water	Practically insoluble
Initial Boiling Point/Boiling Range	284 °C(760 mm Hg)
Flash Point	140 °C(o.c)
Evaporation Rate	No data available
Flammability (solid, gas)	Not Applicable
Partition Coefficient : n-Octanol Water	Log Pow= 2.4
Auto ignition Temperature	>200 °C
Decomposition temperature	No data available

Safety Data Sheet

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Viscosity- dynamic Kinematic	Not applicable
Danger of Explosion	Not applicable

-9.2 Other Information- Not applicable

10. Stability and Reactivity

- 10.1 Reactivity: Not classified as dangerously reactive
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
Stable under recommended storage conditions,
- 10.3 Possibility of hazardous reactions
No hazardous reaction is expected.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials:
Strong oxidizing agents
- 10.6 Hazardous decomposition products:
Nitrogen oxides (NO_x)
Carbon monoxide (CO) and Carbon dioxide (CO₂)

11. Toxicological Information

-11.1 Information on Toxicological effects

Acute Toxicity –

LD50/LC50 value that are relevant for classification

LD50 Oral (rat)	1950 mg/kg
LD50 Dermal (Rabbit)	3170 mg/kg (Re- GESTIS sub data base)
LC50Inhalation(Rat)	5950 mg/M3

-Primary irritant effect

- on the skin: slightly irritating to skin
- on the eyes: Moderately irritant effect
- Sensitization: No sensitizing effects known
- Mutagenicity: In vitro gene mutation in bacteria: Negative. In vitro cytogenicity in mammalian cells: Negative.
In vitro gene mutation in mammalian cells: Negative
- Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Reproductive Toxicity:
Specific target organ toxicity - single exposure No data available(Deet)
Specific target organ toxicity - repeated exposure No data available
- Additional toxicological information – RTECS : XS367500

12. Ecological Information

-12.1 Toxicity

-Aquatic toxicity:

Toxicity To fish : LC50(96 hr *Oncorhynchus mykiss*):71.3 mg/l
Toxicity to Invertebrates: EC50 (48 hrs, *Daphnia magna*) : 75 mg/l

-12.2 Persistence and degradability :Biodegradable

-12.3 Bioaccumulative potential

Substance is not expected to be accumulate in organisms.

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- 12.4 **Mobility in soil** :Expected to have high mobility in soil but no relevant information available.
- Additional ecological information:**
- General notes:** Water hazard class 1 (Assessment by list): slightly hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** Harmful to aquatic life

13. Disposal Consideration

- 13.1 **Waste treatment methods**
- Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Waste disposal key number:** According to local/national regulations.
- European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- Recommendation:** Disposal must be made according to official regulations. Drum decontamination shall be done by initially washing with aqueous detergent solution followed aqueous washes till neutral PH. It is strongly recommended to disfigure the container/drum before disposal.

14. Transport Information

- 14.1 **UN-Number**
- ADR, IMDG, IATA Void
- 14.2 **UN proper shipping name**
- ADR, IMDG, IATA Void
- 14.3 **Transport hazard class(es)**
- ADR, IMDG, IATA
- Class Void
- 14.4 **Packing group**
- ADR, IMDG, IATA Void
- 14.5 **Environmental Hazards:** No marine pollutant
- 14.6 **Special precautions for user** Not applicable.
- 14.7 **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- Transport/Additional information:** Not dangerous according to the above specifications.

15. Regulatory Information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:** Directive 96/82/EC does not apply.
- **Water hazard class:**
Water hazard class :2: hazardous to water
- **Chemical Safety Assessment:** A chemical Safety Assessment has not been carried out .

16. Other Information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

Dept Issuing MSDS- R&D

Abbreviations and acronyms:

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RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

IARC : International Agency for Research on Cancer

RTECS::Registry of Toxic Effects of Chemical Substances

Ref-

- 1) *Regulation (EC)No 1272/2008 of the European Parliament and of the Council*
- 2) *Guidance on the compilation Safety Data Sheet publish by ECHA Ver. 2.1 Feb 2014*
- 3) *Toxnet HSDB*
- 4) *European Chemicals Agency, <http://echa.europa.eu/>*
- 5) *DEET: Review of Toxicological literature by NIEH*
- 6) *GESTIS data base*