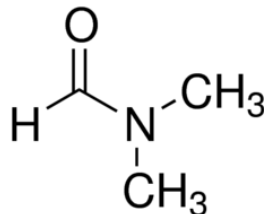


MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
:
EC index no : 616-001-00-X
EC no : 200-679-5
CAS No : 68-12-2
Product code : 00119
Formula : C₃H₇NO
Chemical structure :



Synonyms : DMF

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SPAN LAB
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)
401208 Mumbai - INDIA
PH: +91 9820509929
info@spanlab.in www.spanlab.in

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226
Category 3
Acute toxicity (dermal), H312
Category 4
Acute toxicity (inhal.), H332
Category 4

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Serious eye damage/eye irritation, Category 2 H319
Reproductive toxicity, Category 1B H360D

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Repr.Cat.2; R61
Xn; R20/21
Xi; R36

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H226 - Flammable liquid and vapour
H312+H332 - Harmful in contact with skin or if inhaled
H319 - Causes serious eye irritation
H360D - May damage the unborn child

Precautionary statements (CLP) :

P201 - Obtain special instructions before use
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : DIMETHYL FORMAMIDE SPECIALLY DRIED AR
CAS No : 68-12-2
EC no : 200-679-5
EC index no : 616-001-00-X

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Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. |
| First-aid measures after skin contact | : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth out with water. If you feel unwell, seek medical advice. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|--------------------------------------|---|
| Symptoms/injuries | : May damage the unborn child. |
| Symptoms/injuries after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|---|
| Suitable extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. |
|--------------------------------|--|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Use personal protective equipment as required. |
| Emergency procedures | : Stop release. |

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. |
|-------------------------|--|

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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Hygiene measures : Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves
Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Molecular mass : 73.09 g/mol
Colour : Clear Colorless.
Odour : fishy pungent & amine like.
Odour threshold : No data available
pH : 6.7
Relative evaporation rate (butylacetate=1) : 0.17
Melting point : -61 °C
Freezing point : No data available
Boiling point : 153 °C
Flash point : 580 °C
Auto-ignition temperature : 4450 °C

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| | |
|----------------------------------|---------------------------|
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable |
| Vapour pressure | : 2.7 at 20C |
| Relative vapour density at 20 °C | : 2.52 |
| Relative density | : No data available |
| Density | : 0.949 g/cm ³ |
| Solubility | : Water: Complete |
| Log Pow | : 1.01 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.022 - 0.152 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.

Skin corrosion/irritation : Not classified
pH: 6.7

Serious eye damage/irritation : Causes serious eye irritation.
pH: 6.7

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

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| | |
|---|---------------------------------|
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : May damage the unborn child. |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified |
| Aspiration hazard | : Not classified |
| Potential adverse human health effects and symptoms | : Harmful in contact with skin. |

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

DIMETHYL FORMAMIDE SPECIALLY DRIED AR (68-12-2)

| | |
|---------|------|
| Log Pow | 1.01 |
|---------|------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

DIMETHYL FORMAMIDE SPECIALLY DRIED AR (68-12-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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14.1. UN number

| | |
|---------------|--------|
| UN-No. (ADR) | : 2265 |
| UN-No. (IMDG) | : 2265 |
| UN-No.(IATA) | : 2265 |
| UN-No.(ADN) | : 2265 |
| UN-No. (RID) | : 2265 |

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : N,N-DIMETHYLFORMAMIDE |
| Proper Shipping Name (IMDG) | : N,N-DIMETHYLFORMAMIDE |
| Proper Shipping Name (IATA) | : N,N-DIMETHYLFORMAMIDE |
| Proper Shipping Name (ADN) | : N,N-DIMETHYLFORMAMIDE |
| Proper Shipping Name (RID) | : N,N-DIMETHYLFORMAMIDE |
| Transport document description (ADR) | : UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III, (D/E) |
| Transport document description (IMDG) | : UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III (58°C c.c.) |
| Transport document description (IATA) | : UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III |
| Transport document description (ADN) | : UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III |
| Transport document description (RID) | : UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR) | : 3 |



IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG) | : 3 |



IATA

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 3 |
| Hazard labels (IATA) | : 3 |



ADN

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 3 |
| Danger labels (ADN) | : 3 |

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Safety Data Sheet



RID

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1

Limited quantities (ADR) : 5L

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T2

Portable tank and bulk container special provisions (ADR) : TP2

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Operation (ADR) : S2

Hazard identification number (Kemler No.) : 30

Orange plates :

Tunnel restriction code (ADR) : D/E

EAC code : •2Y

- Transport by sea

Limited quantities (IMDG) : 5 L

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| | |
|---------------------------------|--------------|
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T2 |
| Tank special provisions (IMDG) | : TP2 |
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-D |
| Stowage category (IMDG) | : A |
| Flash point (IMDG) | : 58°C c.c. |
| MFAG-No | : 129 |

- Air transport

| | |
|--|--------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y344 |
| PCA limited quantity max net quantity (IATA) | : 10L |
| PCA packing instructions (IATA) | : 355 |
| PCA max net quantity (IATA) | : 60L |
| CAO packing instructions (IATA) | : 366 |
| CAO max net quantity (IATA) | : 220L |
| ERG code (IATA) | : 3L |

- Inland waterway transport

| | |
|-----------------------------------|-------------|
| Classification code (ADN) | : F1 |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Carriage permitted (ADN) | : T |
| Equipment required (ADN) | : PP, EX, A |
| Ventilation (ADN) | : VE01 |
| Number of blue cones/lights (ADN) | : 0 |

- Rail transport

| | |
|---|---------------------------|
| Classification code (RID) | : F1 |
| Limited quantities (RID) | : 5L |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T2 |
| Portable tank and bulk container special provisions (RID) | : TP2 |
| Tank codes for RID tanks (RID) | : LGBF |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Colis express (express parcels) (RID) | : CE4 |
| Hazard identification number (RID) | : 30 |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

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N,N-dimethylformamide is on the REACH Candidate List

DIMETHYL FORMAMIDE SPECIALLY DRIED AR is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (KBwS-Beschluss; WGK No 83)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

| | |
|---------------------------|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| H226 | Flammable liquid and vapour |
| H312 | Harmful in contact with skin |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H360D | May damage the unborn child |
| R20/21 | Harmful by inhalation and in contact with skin |
| R36 | Irritating to eyes |
| R61 | May cause harm to the unborn child |
| Xi | Irritant |
| Xn | Harmful |

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product