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1. Identification of the substance/mixture and of the company/undertaking **1.1. Product identifier Trade name : n-BUTYLAMINE 98% Product code** : 60015 **Identification of the product** : n-BUTYLAMINE CAS No : 109-73-9 **1.2. Relevant identified uses of the substance or mixture and uses advised against Use** : Industrial. For professional use only. **1.3.** Details of the supplier of the safety data sheet **Company identification** : MOLYCHEM Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442. Email : info@molychem.net Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co., Kulgaon, Badlapur (E), Dist.-Thane-421 503. 1.4. Emergency telephone number Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm). 2. Hazards identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Flammable liquids, H225 Category 2 Acute toxicity (oral), H302 Category 4 Acute toxicity (dermal), H312 Category 4 Acute toxicity (inhal.), H332 Category 4 Skin corrosion/irritation, H314 Category 1A Full text of classification categories and H statements : see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC F: R11 Xn; R20/21/22 C: R35 Full text of R-phrases: see section 16 Adverse physicochemical, human health and environmental effects No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to displayExtra classification(s) to display

Symbol(s) : Highly flammable

Xi : Irritation.



R Phrase(**s**) : R11: Highly flammable.

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38 : Irritating to eyes, respiratory system and skin.

S Phrase(s) : S16 : Keep away from source of ignition-No smoking.

S26 : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advise.

S29 : Do not empty into drains.

Hazard pictograms :



Signal word: Danger

Hazard statements : H225 - Highly flammable liquid and vapour

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled H314 - Causes severe skin burns and eye damage

Precautionary statements : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

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

P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

3. Composition/information on ingredients

3.1. Substance : n-BUTYLAMINE CAS No : 109-73-9 Substance. Contains no other components or impurities which will influence the classification of the product.



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4. First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician. Specific treatment is urgent (see ... on this label).

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated

clothing. Immediately call a POISON CENTER or doctor/physician. Specific measures (see ... on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see ... on this label).

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or

doctor/physician if you feel unwell. Do NOT induce vomiting. Immediately call a

POISON CENTER or doctor/physician. Specific treatment (see ... on this label).

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : Corrosive to the respiratory tract.

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 damage.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed No additional information available

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

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

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

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.

6.4. Reference to other sections

No additional information available

7. Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact during pregnancy/while nursing.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Ground/bond container and receiving equipment. Use explosion-proof

electrical/ventilating/lighting/... equipment. Comply with applicable regulations.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

Packaging materials : Do not store in corrodable metal.

7.3. Specific end use(s)

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No additional information available 8. Exposure controls/personal protection 8.1. Control parameters No additional information available 8.2. Exposure controls Hand protection : protective gloves Eve protection : Chemical goggles or face shield Skin and body protection : Wear suitable protective clothing Respiratory protection : Wear respiratory protection 9.Physical and chemical properties 9.1. Information on basic physical and chemical properties **Odour threshold** : 0.08 ppm **pH** : 13 **Relative evaporation rate (butylacetate=1)**: 7.3 **Melting point** : -49.1 °C **Freezing point** : No data available **Boiling point** : 77.1 °C Flash point : -120 °C Auto-ignition temperature : 3120 °C **Decomposition temperature** : No data available **Flammability** (solid, gas) : Extremely flammable Highly flammable liquid and Vapour pressure : 82 mm Hg at 20C Relative vapour density at 20 °C : 2.5 **Relative density** : No data available **Density** : 0.74 g/cm^3 **Solubility** : Water: Miscible in water Log Pow : No data available **Viscosity, kinematic** : No data available Viscosity, dynamic : No data available **Explosive properties** : No data available **Oxidising properties** : No data available **Explosive limits** : 0.017 - 0.098 vol % 9.2. Other information No additional information available

<u>10. Stability and reactivity</u> 10.1. Reactivity

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Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Direct sunlight.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

11. Toxicological information

11.1. Information on toxicological effects

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

Skin corrosion/irritation : Causes severe skin burns and eye damage. pH: 13 Serious eye damage/irritation : Serious eye damage, category 1, implicit pH: 13 Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Additional information : Corrosive to the respiratory tract

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

<u>12. Ecological information</u>

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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No additional information available **12.6. Other adverse effects** No additional information available

13. Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ... Additional information : Handle empty containers with care because residual vapours are flammable.

<u>14.Transport information</u>

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

14.1. UN number

UN-No. (ADR) : 1125

UN-No. (IMDG) : 1125

UN-No.(IATA) : 1125

UN-No.(ADN): 1125

UN-No. (RID) : 1125

14.2. UN proper shipping name

Proper Shipping Name (ADR) : N-BUTYLAMINE

Proper Shipping Name (IMDG) : n-BUTYLAMINE

Proper Shipping Name (IATA) : N-BUTYLAMINE

Proper Shipping Name (ADN) : n-BUTYLAMINE

Proper Shipping Name (RID) : n-BUTYLAMINE

Transport document description (ADR) : UN 1125 N-BUTYLAMINE, 3 (8), II, (D/E) Transport document description (IMDG) : UN 1125 n-BUTYLAMINE, 3 (8), II (-9°C c.c.)

Transport document description (IATA) : UN 1125 N-BUTYLAMINE, 3 (8), II Transport document description (ADN) : UN 1125 n-BUTYLAMINE, 3 (8), II Transport document description (RID) : UN 1125 n-BUTYLAMINE, 3 (8), II

14.3. Transport hazard class(es)

ADR :Transport hazard class(es) (ADR) : 3 (8)

Danger labels (ADR) : 3, 8

IMDG: Transport hazard class(es) (IMDG) : 3 (8)

Danger labels (IMDG): 3, 8

IATA: Transport hazard class(es) (IATA) : 3 (8)

Hazard labels (IATA) : 3, 8

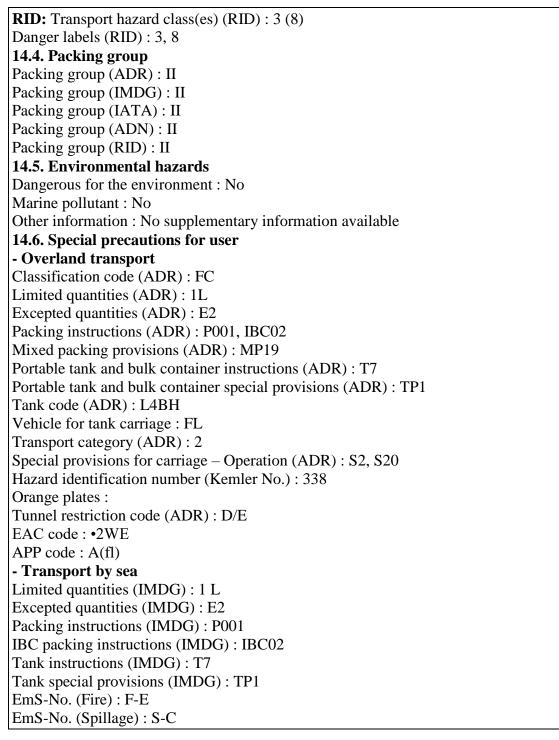
ADN: Transport hazard class(es) (ADN) : 3 (8)

Danger labels (ADN) : 3, 8



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Stowage category (IMDG) : B Stowage and handling (IMDG) : SW2 Flash point (IMDG) : $-9^{\circ}C$ c.c. MFAG-No: 132 Air transport PCA Excepted quantities (IATA) : E2 PCA Limited quantities (IATA) : Y340 PCA limited quantity max net quantity (IATA) : 0.5L PCA packing instructions (IATA) : 352 PCA max net quantity (IATA) : 1L CAO packing instructions (IATA): 363 CAO max net quantity (IATA) : 5L ERG code (IATA) : 3C **Inland waterway transport** Classification code (ADN) : FC Limited quantities (ADN) : 1 L Excepted quantities (ADN) : E2 Carriage permitted (ADN): T Equipment required (ADN) : PP, EP, EX, A Ventilation (ADN) : VE01 Number of blue cones/lights (ADN): 1 **Rail transport** Classification code (RID) : FC Limited quantities (RID) : 1L Excepted quantities (RID) : E2 Packing instructions (RID): P001, IBC02 Mixed packing provisions (RID) : MP19 Portable tank and bulk container instructions (RID): T7 Portable tank and bulk container special provisions (RID) : TP1 Tank codes for RID tanks (RID) : L4BH Transport category (RID): 2 Colis express (express parcels) (RID) : CE7 Hazard identification number (RID): 338 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

15. Regulatory information

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



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15.1.1. EU-Regulations

No REACH Annex XVII restrictions

n-BUTYLAMINE is not on the REACH Candidate List

n-BUTYLAMINE is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to

VwVwS, Annex 2; WGK No 44)

12th Ordinance Implementing the Federal

Immission Control Act - 12.BImSchV

: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

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

15.2. Chemical safety assessment

No additional information available

16. Other information

Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

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This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document Prepared by: MOLYCHEM (INDIA)

For questions contact: MOLYCHEM Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442. Email : info@molychem.net Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat Textile Co., Kulgaon, Badlapur (E), Dist.-Thane-421 503

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