# Samchun Chemicals

# Material Safety Data Sheet

# n-Methyldiethanolamine 45% solution

## Section 1 – PRODUCT AND COMPANY IDENTIFICATION

**1. Product Identifier** n-Methyldiethanolamine 45% solution; N-METHYLIMINODIETHANOL

**2. Recommended Use & Uses advised against** Uses for Laboratory and R&D only

**3. Information of Supplier**

SAMCHUN PURE CHEMICAL CO.,LTD
ADDRESS; (Mogok-dong) 117, Sandan-ro 16Beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea
Emergency Phone; 82-31-668-0700/3
Department; Safety & Environment dep.
Web site; http://www.samchun.com

## Section 2 – HAZARDS and DANGER IDENTIFICATION

**1.GHS Classification· Identification** Serious Eye Damage/Eye Irritation Category2

**2. Label and Mark including Precautionary Statement**

◦**Label elements**

◦**Signal word** Warning

◦**Hazard ·Danger statement** H319 Causes serious eye irritation

◦**Precautionary statement**

**Precaution** P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection

**Measures** P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention.

**Storage** N/A

**Dispose** N/A

**3. Other Hazard-Risk which are not included in the classification criteria**

NFPA index(0~4steps) : Health=1, Fire=1, Reaction=0 <n-Methyldiethanolamine>

## Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

| Chemical Name | Other Name | CAS No. | Content (%) |
|---|---|---|---|
| n-Methyldiethanolamine | N-METHYLIMINODIETHANOL | 105-59-9 | 45 |
| Water | Dihydrogen oxide | 7732-18-5 | 55 |

## Section 4 – FIRST AID MEASURES

**1. Eye Contact** Rinse with plenty of water for at least 15minutes and get medical attention immediately.

**2. Skin Contact** Take off contaminated cloths and shoes immediately, wash with plenty of water and soap for at least 15minutes.

**3. Inhalation** Move victim to fresh air. If breathing is difficult, give artificial respiration and get medical attention immediately.

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| **4. Ingestion** | Do not induce vomiting. Get medical advice/attention immediately. |
| **5. Immediate medical attention and Notes for physician** | Keep the medical personnel aware of the materials involved and take protective action. |

## Section 5 – FIRE-FIGHT MEASURES

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| **1. Suitable extinguish media** | Suitable extinguishing media: water spray, powder extinguishing media, alcohol resistant foam, carbon dioxide extinguishing media<br>Inappropriate extinguishing media: N/A |
| **2. Special hazards arising from the substance** | Thermal decomposition products: carbon oxides, nitrogen oxides |
| **3. Special protective equipment and Precautions for fire-fighters** | Move containers from fire area if you can do it without risk. When extinguishing a fire, be sure to wear personal protective equipment.<br>If it is not possible to extinguish the fire, withdraw immediately. Keep containers cool by spraying with water for a long time, even after the fire is out. Isolate hazardous areas and deny access to people. |

## Section 6 – ACCIDENTIAL RELEASE MEASURES

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| **1.Personal precautions and Emergency procedures** | Do not touch spilled material. Avoid inhalation and skin contact. In case of confined space, wear air respirator and ventilate and remove all sources of ignition. |
| **2. Environmental precautions** | Minimize leak/spill, collect and keep leak/spill in container |
| **3. Methods and material for containment and cleaning up** | Soak up with sand, clay and other inert absorbent material |

## Section 7 – HANDING AND STORAGE

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| **1. Precautions for safe Handling** | Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. All containers should be grounded. |
| **2. Conditions for safe storage** | Keep container tightly closed in a dry, cool and well-ventilated place.<br>Keep away from incompatible materials. |

## Section 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

**1.Occupational exposure limit, biological exposure limit**
**National law of Safety management of**
N/A

| | |
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| **2. Appropriate Engineering controls** | Ensure compliance with applicable exposure limits and operate local exhaust ventilation when working.<br>If the substance is at risk of explosion, ventilation equipment should be explosion-resistant. |

**3. Personal protective equipment**

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| ◦**Respiratory protection** | Because it is concerned about the harmfulness of human body due to chemical substances, it is recommended to wear respiratory protective equipment with canister mask or gas filter in consideration of physical and chemical characteristics when handling.<br>Respiratory protection should be certified by the Health and Safety Authority.<br>It is concerned about the harmfulness of the human body depending on the working environment, it should wear respirator, air-purifying respirator. |
| ◦**Eye-protection** | Wear safety glasses when handling as they may cause human health hazards due to chemicals. Install eye wash facilities and emergency eyewash stations near chemical handling sites |
| ◦**Hand protection** | Wear safety gloves when handling, as it is likely to harm human health due to chemicals |
| ◦**Skin and body proticion** | Wear chemical protective clothing when handling, as it is likely to harm human health due to chemicals |

## Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

| | <n-Methyldiethanolamine> | <Water> |
|---|---|---|
| **1.Physical state and color** | Liquid(Colorless, Yellow) | Liquid(Colorless) |
| **2.Odor** | Fishy odor | Odorless |
| **3.threshold** | N/A | N/A |
| **4. pH** | 11.5(100g/l at 20℃) | 7 |
| **5.Melting/Freezing point** | -21℃ | 0℃ |
| **6.Boiling point/range** | 243℃ | 100℃ |
| **7. Flashing point** | 138℃ | N/A |
| **8. Evaporation speed** | N/A | N/A |
| **9. Flammability(solid,gas)** | Not easily ignited | N/A |
| **10. Flash or Explosion limit upper / lower** | 8.4% / 0.9% | N/A |
| **11. Vapor pressure** | 0.026mbar(40℃) | 17.5mmHg(20℃) |
| **12. Solubility** | Soluble(>1000g/l) | 100% |
| **13. Vapor density** | N/A | N/A |
| **14.Gravity** | 1.04g/$cm^3$ | 1.00 |
| **15. n-octanol-water Partition coefficient** | Log pow : -1.08 | -1.38 |
| **16. Self ignition temp(℃)** | 280℃ | N/A |
| **17. Cracking temp(℃)** | N/A | N/A |
| **18. Viscosity** | 9.05mm2/s | N/A |
| **19. Molecular Weight** | 119.16 | 18.02 |

## Section 10 – STABILITY AND REACTIVITY

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| **1.Chemical stability and Possibility of Hazardous Reactions** | Stable under normal temp. and pressure |
| **2. Conditions to Avoid** | Keep away from heat, sparks, flames, and other sources of ignition. |
| **3. Incompatible Materials** | Combustible materials, reducing materials |
| **4. Hazardous Decomposition Products** | Thermal decomposition products: carbon oxides, nitrogen oxides |

## Section 11 – TOXICOLOGICAL INFORMAION

**1. Information on the likely routes of exposure.**

N/A

**2. Health hazard information**

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| ◦**Acute toxic** | Oral : LD50 9778 mg/kg (estimated)<br>Skin : 13311.11 mg/kg (estimated)<br>Inhalation : N/A |
| ◦**Serious skin corrosive / irritation** | No skin irritation |
| ◦**Serious eye damage / irritation** | Irritating to eyes. |
| ◦**Respiratory sensitization** | Animal studies do not show hypersensitivity |
| ◦**Skin sensitization** | Animal studies do not show hypersensitivity |
| ◦ **Carcinogenicity** | N/A |
| ◦ **Germ cell Mutagenicity** | No mutagenic effects were observed in various tests using bacterial and mammalian cell cultures.<br>No mutagenicity in mammalian tests |
| ◦ **Reproductive toxic** | N/A |
| ◦**Specific target organ toxicity (single exposure )** | N/A |
| ◦**Specific target organ toxicity (repeated exposure )** | N/A |
| ◦**Aspiration hazard** | N/A |

## Section 12 – ECOLOGICAL INFORMATION

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| **1.Acquatic and Terrestrial eco toxicity** | Fish toxicity : N/A<br>Invertebrate toxicity : N/A<br>Sea algae : N/A |
| **2.Persistence and degradability** | Persistence : N/A<br>Degradability : N/A |
| **3.Bioaccumulative potential** | Concentrations : N/A<br>Bioaccumulative : N/A |
| **4.Mobility in soil** | N/A |
| **5.Other adverse effects** | N/A |

## Section 13 – Disposable considerations

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| **1.Waste methods** | Dispose in accordance with local regulations. |
| **2.Waste warning** | Dispose prohibited substances and waste separately from others. |

## Section 14 – TRANSPORT INFORMATION

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| **1. UN No.** | Non-described |
| **2.Proper shipping Name** | Non-described |
| **3.Hazard class** | Non-described |
| **4.Packing group** | Non-described |
| **5.Marine pollutnat** | N/A |
| **6.Particular safety Measures for transportation** | Non-described |

## Section 15 – REGULATARY INFORMATION

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|---|---|
| **1.Occupation safety and health acts** | Non-described |
| **2. Chemical Substances Control Act** | Non-described |
| **3. National law of Safety management of hazardous material** | 4 Class 3 Petroleum (Water-soluble liquid) 4000L |
| **4.National law of management of Wastes** | Designated Waste |
| **5.Other domestic and foreign law** | Non-described |

## Section 16 – OTHER INFORMATION

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| **1. Material source** | A chemical information MSDS Safety and Health Agency<br>National Institute of Environmental Research Chemical Information Systems<br>Korea Industrial Technology National Fire Hazardous Materials Information System |
| **1. The 1st edition** | 2017.08.28 |
| **2. Revision and The final revision** | - / 2019.01.03 |

**. Other references**

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