ChemicalBook

# Chemical Safety Data Sheet MSDS / SDS

# N-Phenyl-N-(4-piperidinyl)propanamide admixture with HCl salt

Revision Date:2026-05-31 Revision Number:1

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

### Product identifier

| | |
|---|---|
| Product name | : N-Phenyl-N-(4-piperidinyl)propanamide admixture with HCl salt |
| CBnumber | : CB4853167 |
| CAS | : 1609-66-1 |
| EINECS Number | : 216-543-3 |
| Synonyms | : norfentanyl,Norfentanyl oxalate |

### Relevant identified uses of the substance or mixture and uses advised against

| | |
|---|---|
| Relevant identified uses | : For R&D use only. Not for medicinal, household or other use. |
| Uses advised against | : none |

### Company Identification

| | |
|---|---|
| Company | : Chemicalbook |
| Address | : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing |
| Telephone | : 010-86108875 |

## SECTION 2: Hazards identification

### GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Warning

**Precautionary statements**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

**Hazard statements**

H319 Causes serious eye irritation

H315 Causes skin irritation

H302 Harmful if swallowed

## SECTION 3: Composition/information on ingredients

### Substance

| | |
|---|---|
| Product name | : N-Phenyl-N-(4-piperidinyl)propanamide admixture with HCl salt |
| Synonyms | : norfentanyl,Norfentanyl oxalate |
| CAS | : 1609-66-1 |
| EC number | : 216-543-3 |
| MF | : C14H20N2O |
| MW | : 232.32 |

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## SECTION 4: First aid measures

### Description of first aid measures

### General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

### After inhalation

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

### After skin contact

Immediately wash with water and soap and rinse thoroughly.

### After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

### After swallowing

Do not induce vomiting; immediately call for medical help.

### Information for doctor

### Most important symptoms and effects, both acute and delayed

No further relevant information available.

### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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## SECTION 5: Firefighting measures

### Extinguishing media

### Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### Special hazards arising from the substance or mixture

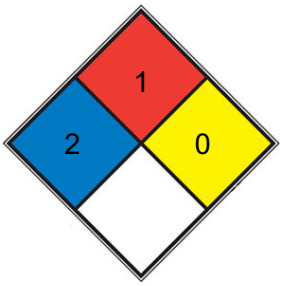
67-56-1During heating or in case of fire poisonous gases are produced.

### Advice for firefighters

### Protective equipment

Mouth respiratory protective device.

### NFPA 704




| | | |
|---|---|---|
| HEALTH | 2 | Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether, ammonium phosphate, iodine) |
| FIRE | 1 | Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. mineral oil, ammonia) |
| REACT | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2) |
| SPEC. HAZ. | | |

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

### Environmental precautions

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### Protective Action Criteria for Chemicals

### PAC-1

67-56-1 Methanol 530 ppm

### PAC-2

67-56-1 Methanol 2,100 ppm

### PAC-3

67-56-1 Methanol 7200* ppm

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## SECTION 7: Handling and storage

### Handling

### Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

### Information about protection against explosions and fires

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

### Conditions for safe storage, including any incompatibilities

### Storage

Store in accordance with information listed on the product insert.

### Requirements to be met by storerooms and receptacles

Store in a cool location.

### Information about storage in one common storage facility

Not required.

### Further information about storage conditions

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

### Specific end use(s)

No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### Additional information about design of technical systems

No further data; see section 7.

### Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

| 67-56-1 Methanol | |
|---|---|
| PEL | Long-term value: 260 mg/m³, 200 ppm |
| REL | Short-term value: 325 mg/m³, 250 ppm<br>Long-term value: 260 mg/m³, 200 ppm<br>Skin |
| TLV | Short-term value: 250 ppm<br>Long-term value: 200 ppm<br>Skin; BEI |

| Ingredients with biological limit values: | |
|---|---|
| **67-56-1 Methanol** | |
| BEI | 15 mg/L<br>Medium: urine<br>Time: end of shift<br>Parameter: Methanol (background, nonspecific) |

### Additional information

The lists that were valid during the creation were used as basis.

### Exposure controls

### Personal protective equipment

### General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

### Breathing equipment

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device

that is independent of circulating air.

### Protection of hands

Protective gloves

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

### Material of gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

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

### Eye protection

Tightly sealed goggles

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

### Appearance

### Physical State

Liquid

### Color

According to product specification

### Odor

Alcohol-like

### Structural Formula

C14H20N2O

### Molecular Weight

232.3 g/mol

### Odor Threshold

Not determined.

### Formulation

A 1 mg/ml solution in methanol

### pH

Not determined.

### Change in condition

### Melting point/Melting range

-98 °C (-144.4 °F)

### Boiling point/Boiling range

64.7 °C (148.5 °F)

### Flash point

11 °C (51.8 °F)

### Flammability (solid,gas)

Highly flammable.

### Auto igniting

455 °C (851 °F)

### Decomposition temperature

Not determined.

### Ignition temperature

Product is not selfigniting.

### Danger of explosion

Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.

### Explosion limits

Lower: 5.5 Vol %

Upper: 44 Vol %

### Vapor Pressure at 20 °C (68 °F)

128 hPa (96 mm Hg)

### Density at 20 °C (68 °F)

0.79 g/cm³ (6.59255 lbs/gal)

### Relative Density

1.075±0.06 g/cm3(Predicted)

### Vapor Density

Not determined.

### Evaporation Rate

Not determined.

### Solubility in / Miscibility with

DMF: 30 mg/ml; DMSO: 20 mg/ml; Ethanol: 30 mg/ml; PBS (pH 7.2): 10 mg/ml

### Water

Fully miscible.

### Partition coefficient (n-octanol/water)

Not determined.

### Viscosity

### Dynamic

Not determined.

### Kinematic

Not determined.

### Organic solvents

99.9 %

### VOC content

99.90 % 999.0 g/l / 8.34 lb/gal

### Solids content

0.1 %

### Other information

No information available

0.001-0.002Pa at 20-25℃

### Water solubility

Insoluble in water.

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## SECTION 10: Stability and reactivity

### Reactivity

No further relevant information available.

### Chemical stability

### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

oxidizing agents

### Hazardous decomposition products

carbon monoxide, carbon dioxide

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## SECTION 11: Toxicological information

### Information on toxicological effects

### Acute toxicity

LD/LC50 values that are relevant for classification:

| Substance / Estimate | Route | Endpoint | Value |
|---|---|---|---|
| ATE (Acute Toxicity Estimate) | Oral | LD50 | 100 mg/kg |
| ATE (Acute Toxicity Estimate) | Dermal | LD50 | 300 mg/kg |
| ATE (Acute Toxicity Estimate) | Inhalative | LC50/4 h | 3 mg/l |
| 67-56-1 Methanol | Oral | LDLO | 143 mg/kg (hmn) |
| 67-56-1 Methanol | Oral | TDLO | 5 ml/kg (rat) |
| 67-56-1 Methanol | Oral | LD50 | 5,600 mg/kg (rat) |
| 67-56-1 Methanol | Dermal | LD50 | 15,800 mg/kg (rabbit) |
| 67-56-1 Methanol | Inhalative | LC50/4 h | 64,000 mg/m³ (rat) |
| 67-56-1 Methanol | Inhalative | LC50 | 61,100 mg/m³/134 m (mouse)<br>Irritation of skin Irritation 20 mg/24h (rabbit)<br>Irritation (rabbit)<br>Irritation 5.63 mg/kg/exempt preparation (rabbit)<br>Irritation of eyes Irritation 40 mg (rabbit) |
| 67-56-1 Methanol | Intraperitoneal | TDLO | 5 mg/kg (rat) |
| 67-56-1 Methanol | Intraperitoneal | LD50 | 10,765 mg/kg (mouse) |
| 67-56-1 Methanol | Subcutaneous | LD50 | 143 mg/kg/human (mouse)<br>Data 20 mg/24h (rabbit) |

### Primary irritant effect

### on the skin

No irritant effect.

### on the eye

No irritating effect.

### Sensitization

Sensitization possible through skin contact.

### Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations

Toxic

Irritant

### Carcinogenic categories

### IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

### NTP (National Toxicology Program)

None of the ingredients is listed.

### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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## SECTION 12: Ecological information

### Toxicity

### Aquatic toxicity

No further relevant information available.

### Persistence and degradability

No further relevant information available.

### Behavior in environmental systems

### Bioaccumulative potential

No further relevant information available.

### Mobility in soil

No further relevant information available.

### Additional ecological information

### General notes

Water hazard class 2 (Self-assessment) hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

### Results of PBT and vPvB assessment

### PBT

Not applicable.

### vPvB

Not applicable.

### PBT:

Not applicable.

### vPvB:

Not applicable.

### Other adverse effects

No further relevant information available.

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## SECTION 13: Disposal considerations

### Waste treatment methods

### Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Uncleaned packagings

### Recommendation

Disposal must be made according to official regulations.

### Recommended cleansing agent

Water, if necessary with cleansing agents.

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## SECTION 14: Transport information

### UN-Number

DOT, IMDG, IATA UN1230

### UN proper shipping name

DOT, IATA Methanol solution

IMDG METHANOL solution

### Transport hazard class(es)

#### DOT

Class: 3 Flammable liquids

Label: 3, 6.1

**IMDG**

Class: 3 Flammable liquids

Label: 3/6.1

**IATA**

Class: 3 Flammable liquids

Label: 3 (6.1)

### Packing group

DOT, IMDG, IATA II

### Environmental hazards

Not applicable.

### Special precautions for user

Warning: Flammable liquids

### Hazard identification number (Kemler code)

336

### EMS Number

F-E,S-D

### Stowage Category

B

### Stowage Code

SW2 Clear of living quarters.

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### Transport/Additional information

### DOT:

### Quantity limitations

On passenger aircraft/rail: 1 L

On cargo aircraft only: 60 L

### IMDG:

### Limited quantities (LQ)

1L

### Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

### IATA:

### Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of

E1, E2, E4, or E5, this item meets the De Minimis

Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as

Dangerous Goods/Excepted Quantity.

### UN "Model Regulation"

UN 1230 METHANOL SOLUTION, 3 (6.1), II

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## SECTION 15: Regulatory information

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

No further relevant information available.

### Sara

| | |
|---|---|
| Section 355 (extremely hazardous substances): | None of the ingredients is listed. |
| Section 313 (Specific toxic chemical listings): | 67-56-1 Methanol |
| TSCA (Toxic Substances Control Act): | 67-56-1 Methanol ACTIVE |
| Hazardous Air Pollutants 67-56-1 Methanol | |

### Proposition 65

| | |
|---|---|
| Chemicals known to cause cancer: | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for females: | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for males: | None of the ingredients is listed. |
| Chemicals known to cause developmental toxicity: | 67-56-1 Methanol |

### Carcinogenic categories

| | |
|---|---|
| EPA (Environmental Protection Agency): | None of the ingredients is listed. |

### TLV (Threshold Limit Value)

None of the ingredients is listed.

### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Sensitization - Skin 1: Skin sensitisation – Category 1

Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1