

Section 1: Product & Company Information

Product Identifier: N-Methyl Pyrrolidone

Other Means of Identification

Product Number: 150009

Recommended Use and Restrictions on Use

Recommended Use: Cleaning solutions, solvent, coatings, laboratory chemicals, processing aid, agrochemicals, functional fluids, road and construction applications

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918 USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Flammable, Liquids - 4

Health Hazard(s)

Acute Toxicity, Oral - 5

Corrosion/Irritation, Skin - 2

(Corrosion) Damage/Irritation, Eye - 2A

Toxic to Reproduction - 1

Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

Specific Target Organ Toxicity (STOT), Repeated exposure - 2

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H227: Combustible liquid.

H303: May be harmful if swallowed.

H315: Causes skin Irritation.

H319: Causes serious eye Irritation.

H335: May cause respiratory Irritation.

H360: May damage fertility or the unborn child.

H373: May cause damage to organs.

Precautionary Statements

General

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Prevention

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

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

P233: Keep container tightly closed.

P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P314: Get medical advice/attention if you feel unwell.
P321: Specific treatment (see supplemental first aid instructions on this label).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use suitable extinguishing media for extinction.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
N-METHYL-2-PYRROLIDONE		0000872-50-4	75 – 100%	-

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Eliminate all ignition sources if safe to do so.

Skin Contact

Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). If wearing goggles, flush head and face thoroughly before removing goggles. Rinse skin with lukewarm, gently flowing water/shower for duration of 30 minutes or continue until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a flushing duration of 30 minutes, or continue until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position. Drink a glass of water or milk to dilute. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Symptoms

No data available.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures**General Fire Hazards**

In case of fire and/or explosion do not breathe fumes. Use water spray to keep fire-exposed containers cool. Move containers from fire area if you can do so without risk. Water may be ineffective in fighting the fire. Fight fire from a protected location.

Suitable (and Unsuitable) Extinguishing Media**Suitable Extinguishing Media**

Dry chemical, alcohol resistant foam, carbon dioxide and water spray is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

Do not use full pressure water jet.

Specific Hazards Arising from the Chemical

Contact with most metals causes formation of flammable and explosive Hydrogen gas. Flammable in presence of oxidizing materials. Avoid static discharge & mechanical impact to containers. Vapor may travel considerable distance to source of ignition and flash back.

Closed containers may explode when exposed to fire due to pressure buildup. Products of combustion: PTSA vapor, CO₂, CO.

Special Protective Equipment and Precautions for Firefighters**Special Fire-Fighting Equipment Procedures**

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Thoroughly decontaminate equipment after use. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures**Personal Precautions, Protective Equipment and Emergency Procedures**

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

Methods and Materials for Containment and Clean-Up

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Neutralize with alkali solution or ammonia. Heat of reaction will be released.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

Section 7: Handling and Storage**Precautions for Safe Handling**

Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored.

Conditions for Safe Storage, including any Incompatibilities

Take measures to prevent the build up of electrostatic discharge. Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Ground and bond containers when transferring material. Do not use pressure to unload containers. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat flame, sparks, static electricity or other sources of ignition. They may explode and cause injury or death. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Section 8: Exposure Controls/Personal Protection**Control Parameters****Occupational Exposure Limits**

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

Use NIOSH/MSHA approved self-contained breathing apparatus where vapor concentration may be above TLV limits. Below TLV limits use NIOSH/MSHA approved vapor respirator or an airline respirator with escape bottle provisions.

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing & PPE to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless

Odor: No data available.

Odor Threshold: No data available.

pH: No data available.

Melting Point/Freezing Point: -11.6 °C

Initial Boiling Point and Boiling Range: 202 °C

Flash Point: 190 °F

Evaporation Rate (butyl acetate=1): No data available.

Flammability (solid, gas): No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: No data available.

Flammability Limit – Lower: No data available.

Explosive Limit – Upper: 9.5 %(V)

Explosive Limit – Lower: 1 %(V)

Vapor Pressure: > 1.33 hPa @ 68o F

Vapor Density (air =1): 3.4 (Air = 1.0)

Relative Density (water=1): No data available.

Solubility(ies):

Solubility in water: Completely miscible.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-Ignition Temperature: 346 °C

Decomposition Temperature: No data available.

Viscosity: No data available.

Other Information:

Molecular Weight: No data available.

Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid contact with heat, sparks, fire, direct sunlight, water and incompatibles.

Incompatible Materials

Reacts with alkalis to release heat. Corrodes metals. May react with metals to generate hydrogen gas. Liberates explosive Hydrogen gas when reacting with chlorides and stainless steel.

Hazardous Decomposition Products

PTSA vapor, CO₂, CO.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: May be harmful if swallowed

Inhalation: No data available.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

No data available.

Dermal

No data available.

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Eye Irritation

Causes serious eye irritation.

Respiratory/Skin Sensitization

No data available.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

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.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity – Single Exposure

May cause respiratory irritation. The substance is irritating to the eyes and respiratory tract.

Specific Target Organ Toxicity – Repeated Exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Material is a pulmonary aspiration hazard.

Other Effects

The following medical conditions may be aggravated by exposure: skin disorders. Tests in some laboratory animals indicate this compound may have embryotoxic activity. Tests in laboratory animals have shown effects on any of the following organs/systems: kidneys, liver.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

Expected to be readily biodegradable. This product is not expected to persist in the environment.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

May be harmful to aquatic organisms due to the shift of the pH.

Section 13: Disposal Considerations

Disposal Instructions

Collect and reclaim or dispose of sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemicals or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Clean Air Act (CAA), Section 112(r)

No data available.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No data available.

EPCRA 304 Emergency Response Notification

No data available.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes

Sudden Release of Pressure: No

Reactive: No

Acute (Immediate) Health Hazard: Yes

Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: /

Flammability: 2

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2

Fire Hazard: 2

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Assistant C

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Last Revised By: -

Last Revision Date: -

Current Revision: -

Sections Revised: -

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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