NANO TECHNOLOGY
CHEMICALS

Safety Data Sheet

N-Methyl-2-Pyrrolidone (NMP)

The pages that follow are the Safety Data Sheet as issued by the supplier/manufacturer. They are provided unchanged by Nano Technology Chemicals (NTC). Refer to Section 1 of the attached SDS for the responsible party and emergency telephone number.

Questions about this product or document:

Nano Technology Chemicals, Charlotte, NC
Phone: 704-659-3682
Email: sales@nanotechnologychemicals.com
Web: nanotechnologychemicals.com

Cover sheet date: October 12, 2026. For the SDS revision date, see the attached document.

In an emergency, use the emergency telephone number in Section 1 of the attached SDS.

SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

N-METHYL PYRROLIDONE

Version	Revision Date:	SDS Number:	Date of last issue: 07/16/2026
1.8	09/16/2026	100000004560	Date of first issue: 10/27/2014

SECTION 1. IDENTIFICATION

Product Identifier : N-METHYL PYRROLIDONE
Product code : 000000000000105889
Synonyms : 1-Methyl-2-pyrrolidone; N-Methyl-2-pyrrolidone; N-Methylpyrrolidinone; NMP

Manufacturer or supplier's details

Company : Univar Solutions USA
Address 3250 Lacey Rd., Suite 600
Downers Grove, IL 60515
United States of America (USA)

Emergency telephone number:

Univar Solutions USA**:-**CHEMTREC: 1-800-424-9300
CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Phone: 1-855-429-2661
Regulatory Information Number: 1-855-429-2661
Email: SDSNA@univarsolutions.com

Recommended use of the chemical and restrictions on use

Recommended use : Solvent
Reserved for industrial and professional use.

Restrictions on use : Cosmetics, Personal care
Not recommended for drug, food or household use.
Not for Consumer Use.

SECTION 2. HAZARD IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Flammable liquids : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

Other hazards

None known.

Hazards associated with a change in physical form:

No data available

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :
H227 Combustible liquid.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H360FD May damage fertility. May damage the unborn child.

Precautionary statements :

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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
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.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards resulting from a reaction with other chemicals under normal conditions of use:

No data available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical name	Weight percent	Trade secret
872-50-4	1-Methyl-2-pyrrolidone	90 - 100	-
60544-40-3	Dimethyl pyrrolidinone	0.1 - 1	-

Actual concentration is withheld as a trade secret
Any concentration shown as a range is due to batch variation.

Synonyms : 1-Methyl-2-pyrrolidone; N-Methyl-2-pyrrolidone; N-Methylpyrrolidinone; NMP

SECTION 4. FIRST-AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed : Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May damage fertility. May damage the unborn child.

Immediate Medical Attention and Special Treatment	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx) toxic fumes
Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment and precautions for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.
Precautions for safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the ap-

plication area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
872-50-4	1-Methyl-2-pyrrolidone	TWA	15 ppm 60 mg/m3	US WEEL
		STEL	30 ppm 120 mg/m3	US WEEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	liquid
Colour	:	clear, colourless
Odour	:	mild, amine-like
Odour Threshold	:	No data available
pH	:	8.5 - 10 @ 100 g/l @ 20 °C (68 °F)
Freezing point (Melting point/range)	:	-23.6 °C (-10.5 °F) (1013 hPa)
Boiling point (Boiling point/boiling range)	:	204.3 °C (399.7 °F) (1013 hPa)
Flash point	:	91 °C (196 °F) Method: DIN 51758, closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	9.5 %(V)
Lower explosion limit	:	1.3 %(V)
Vapour pressure	:	0.32 hPa @ 20 °C (68 °F)
Relative vapour density	:	> 1 @ 20 °C (68 °F) (Air = 1.0)
Relative density	:	1.03 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	:	1.03 g/cm3 @ 25 °C (77 °F) Method: DIN 51757
Solubility(ies)		
Water solubility	:	Miscible
Solubility in other solvents	:	completely miscible Solvent: organic solvents
Partition coefficient: n-octanol/water	:	log Pow: -0.46 @ 25 °C (77 °F) Method: OECD Test Guideline 107
Auto-ignition temperature	:	Estimated 245 - 251 °C
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	1.661 mPa.s @ 25 °C (77 °F)

Particle characteristics : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
Incompatible materials : strong oxidizing agents
strong reducing agents
Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

872-50-4:

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: yes
Assessment: The component/mixture is minimally toxic after short term inhalation.

Skin corrosion/irritation

Causes skin irritation.

Components:

872-50-4:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Irritating to skin.
GLP : yes

60544-40-3:

Result : Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

872-50-4:

Species : Rabbit
Result : Irritating to eyes.

Method : OECD Test Guideline 405
GLP : no

60544-40-3:
Result : Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation
Not classified due to lack of data.

Respiratory sensitisation
Not classified due to lack of data.

Germ cell mutagenicity
Not classified due to lack of data.

Components:

872-50-4:
Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity
Not classified due to lack of data.

Components:

872-50-4:
Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

IARC 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.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP 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.

Reproductive toxicity
May damage fertility. May damage the unborn child.

Components:

872-50-4:
Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: oral
Dose: 0, 50, 160, 500/350 mg/kg bw/
General Toxicity - Parent: 350 mg/kg bw
General Toxicity F1: 160 mg/kg bw
Symptoms: Fetal effects, Reduced embryonic survival
Method: OECD Test Guideline 416
Result: Embryotoxic effects and adverse effects on the off-

spring were detected.
GLP: yes

Effects on foetal development : Species: Rat
Application Route: oral
Dose: 0, 125, 250, 500, 750 mg/kg b
Duration of Single Treatment: 10 d
General Toxicity Maternal: 125 mg/kg bw
Teratogenicity: 250 mg/kg bw
Embryo-foetal toxicity: 125 mg/kg
Symptoms: Skeletal malformations, Visceral malformations, Reduced number of viable fetuses
Method: OECD Test Guideline 414
Result: Teratogenic effects, Developmental toxicity occurred at maternal toxicity dose levels
GLP: yes

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.

60544-40-3:
Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

May cause respiratory irritation.

Components:

872-50-4:
Target Organs : Nose
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

60544-40-3:
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-637-7922
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR Road

UN/ID/NA number	:	NA 1993
Proper shipping name	:	Combustible liquid, n.o.s. (1-METHYL-2-PYRROLIDONE)
Class	:	CBL
Packing group	:	III
Labels	:	Combustible Liquid
ERG Code	:	128
Marine pollutant	:	no
Special Notes:	:	In accordance with 49 CFR non-bulk containers (less than 450L/119 gallon capacity) of this material may be shipped as non-regulated when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Reproductive toxicity
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

872-50-4	1-Methyl-2-pyrrolidone	>= 90 - <= 100 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

872-50-4 1-Methyl-2-pyrrolidone

Pennsylvania Right To Know

872-50-4 1-Methyl-2-pyrrolidone

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

872-50-4 1-Methyl-2-pyrrolidone

Washington Chemicals of High Concern

872-50-4 1-Methyl-2-pyrrolidone

California Prop 65

⚠ **WARNING**: This product can expose you to chemicals including 1-Methyl-2-pyrrolidone, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Permissible Exposure Limits for Chemical Contaminants

872-50-4 1-Methyl-2-pyrrolidone

The components of this product are reported in the following inventories:

TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
CA. DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

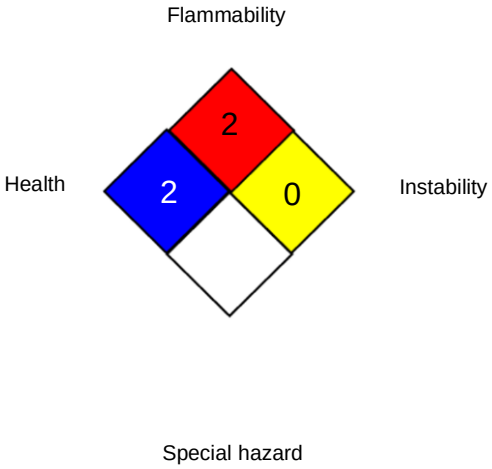
The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

872-50-4	1-Methyl-2-pyrrolidone

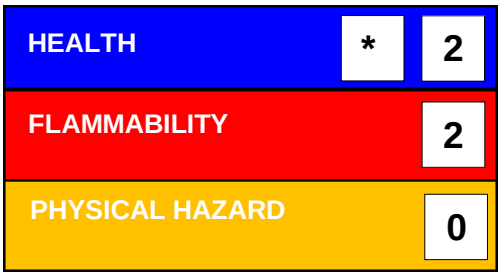
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
US WEEL / TWA	:	8-hr TWA
US WEEL / STEL	:	Short-Term TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely

Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

Revision Date : 09/16/2026

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN