

US: ENGLISH

identification

### SAFETY DATA SHEET

### **Section 1. Identification**

Product identifier : PB7026
Product name : NMP

Product name : NMP

Other means of : 1-methyl-2-pyrrolidone; 2-Pyrrolidinone, 1-methyl-; n-Methylpyrrolidone; N-Methyl-

2-pyrrolidinone; Methylpyrrolidone; 1-methylpyrrolidin-2-one; 1-methyl-2-pyrrolidinone;

NMP; M-pyrol; Methyl-2-Pyrrolidone, n-; n-methyl-2-pyrrolidine

**Date of issue** : 2/7/2024

Version : 7

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

Identified uses : Solvent.

**Uses advised against**: Not for sale to or use by consumers.

Supplier's details : Axalta Coating Systems, LLC

50 Applied Bank Blvd.

Suite 300

Glen Mills, PA 19342

USA

**Product information** 855-6AXALTA

Emergency telephone

number

: (CHEMTREC) - 800-424-9300

### Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A

TOXIC TO REPRODUCTION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

**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.

H360 - May damage fertility or the unborn child.

**Precautionary statements** 

### Section 2. Hazards identification

**Prevention**: P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P210 - Keep away from flames and hot surfaces. No smoking.

P261 - Avoid breathing vapor.

P264 - Wash hands thoroughly after handling.

**Response**: P308 + P313 - IF exposed or concerned: Get medical advice or attention.

P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

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 or attention.

: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise

classified

Storage

: None known.

### Section 3. Composition/information on ingredients

**Substance/mixture**: Substance

Ingredient name	CAS number	Concentration
M-methyl-2-pyrrolidone	872-50-4	100

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

#### **Description of necessary first aid measures**

Eye contact : Immediate

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it

is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed

person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and

shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing

before reuse. Clean shoes thoroughly before reuse.

### Section 4. First aid measures

#### Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

Eye contact : Causes serious eye irritation.Inhalation : May cause respiratory irritation.

**Skin contact**: Causes skin irritation.

**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:

pain or irritation watering redness

**Inhalation**: Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion**: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

#### See toxicological information (Section 11)

### Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing

media

: Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

Specific hazards arising from the chemical

: Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated. a pressure increase will occur and the container may burst. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous thermal decomposition products : Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

**Environmental precautions** 

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact

### Section 6. Accidental release measures

information and Section 13 for waste disposal.

### Section 7. Handling and storage

#### Precautions for safe handling

#### Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# including any incompatibilities

**Conditions for safe storage.** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Storage code : 11

# Section 8. Exposure controls/personal protection

#### **Control parameters**

#### Occupational exposure limits

Ingredient name	Exposure limits	
M-methyl-2-pyrrolidone	OARS WEEL (United States, 4/2022). Absorbed	
	through skin.	
	TWA: 15 ppm 8 hours.	
	STEL: 120 mg/m³ 15 minutes.	
	STEL: 30 ppm 15 minutes.	
	TWA: 60 mg/m³ 8 hours.	
	CAL OSHA PEL (United States, 5/2018). Absorbed	
	through skin.	
	TWA: 4 mg/m <sup>3</sup> 8 hours.	
	TWA: 1 ppm 8 hours.	

### Section 8. Exposure controls/personal protection

# Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

# Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **Individual protection measures**

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

**Hand protection** 

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** 

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties

**Appearance** 

Physical state : Liquid. [Hygroscopic.]

Color : Clear.

Odor : Characteristic.
Odor threshold : Not available.
pH : Not applicable.

Melting point: Technically not possible to measureBoiling point: 202 to 204.3°C (395.6 to 399.7°F)Flash point: Closed cup: 37.778°C (100°F)

Open cup: 91°C (195.8°F) [Pensky-Martens]

**Evaporation rate** : 0.03 (butyl acetate = 1)

# Section 9. Physical and chemical properties

Flammability (solid, gas) : Not available. Lower and upper explosive : Lower: 1.3% (flammable) limits Upper: 9.5%

Vapor pressure : 0.027 kPa (0.2 mm Hg)

Vapor density 3.4 [Air = 1]

**Density** : 1.02 g/cm³ [77°F (25°C)] Partition coefficient: n-: -0.46 [OECD 107]

octanol/water

**Auto-ignition temperature** : 245°C (473°F) **Decomposition temperature**: Not applicable.

**Viscosity** : Dynamic: 1.66 mPa·s (1.66 cP)

Flow time (ISO 2431) : Not available. Molecular weight : 99.13 g/mole Heat of combustion : -30238000 J/kg

# Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

Chemical stability : The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not

allow vapor to accumulate in low or confined areas. : Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition

Incompatible materials

products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### **Section 11. Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
M-methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
M-methyl-2-pyrrolidone	Eyes - Moderate irritant	Rabbit	-	100 mg	-

#### Sensitization

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

# **Section 11. Toxicological information**

#### Reproductive toxicity

Not available.

#### **Teratogenicity**

Not available.

#### Specific target organ toxicity (single exposure)

Name	· · · · · · · · · · · · · · · · · · ·	Route of exposure	Target organs
M-methyl-2-pyrrolidone	Category 3	-	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Not available.

#### **Aspiration hazard**

Not available.

Information on the likely

routes of exposure

: Not available.

#### Potential acute health effects

Eye contact : Causes serious eye irritation.Inhalation : May cause respiratory irritation.

**Skin contact**: Causes skin irritation.

**Ingestion**: No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:

pain or irritation watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion**: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

# <u>Delayed and immediate effects and also chronic effects from short and long term exposure</u> Short term exposure

### Section 11. Toxicological information

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

#### Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.
 Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.

**Teratogenicity**: May damage the unborn child.

**Developmental effects**: No known significant effects or critical hazards.

Fertility effects : May damage fertility.

#### **Numerical measures of toxicity**

#### Acute toxicity estimates

Route	ATE value
Oral	3914 mg/kg
	8000 mg/kg

# **Section 12. Ecological information**

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses waterways.

# Section 13. Disposal considerations

#### Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in the

event of an accident or spillage.

**Transport in bulk according**: Not available. **to IMO instruments** 

The actual shipping description for this product may vary based several factors including, but not limited to, the volume of material, size of the container, mode of transport and use of exemptions or exceptions found in the applicable regulations. The information provided in Section 14 is one possible shipping description for this product. Consult your shipping specialist or supplier for appropriate assignment information.

# Section 15. Regulatory information

Clean Air Act Section 112 : Not listed

(b) Hazardous Air Pollutants (HAPs) SARA 304 RQ

SARA 304 RQ : Not applicable.

**SARA 311/312** 

Classification : FLAMMABLE LIQUIDS - Category 4

SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A

TOXIC TO REPRODUCTION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

#### **SARA 313**

	Product name	CAS number	%
Form R - Reporting requirements	N-methyl-2-pyrrolidone	872-50-4	100
Supplier notification	M-methyl-2-pyrrolidone	872-50-4	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

#### **Inventory list**

### Section 15. Regulatory information

Canada : This material is listed or exempted.United States : This material is listed or exempted.

### **Section 16. Other information**

#### **Hazardous Material Information System (U.S.A.)**



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

#### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### <u>History</u>

**Date of issue** : 2/7/2024

Version : 7

Product stewardship and regulatory compliance.

**Key to abbreviations** : ATE = Acute Toxicity Estimate

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

✓ Indicates information that has changed from previously issued version.

#### Notice to reader

This product is intended for industrial use only.

Safety Data Sheet (SDS) content is believed to be accurate as of its issue date, but is subject to change as new information is received by Axalta Coatings Systems, LLC or any of its subsidiaries or affiliates (Axalta). This SDS may incorporate information that has been provided to Axalta by its suppliers. Users should ensure that they are referring to the most current version of the SDS. Users are responsible for following the precautions identified in this SDS. It is the users' responsibility to comply with all laws and regulations applicable to the safe handling, use, and disposal of the product.

### Section 16. Other information

Users of Axalta products should read all relevant product information prior to use, and make their own determination as to the suitability of the products for their intended use. Except as otherwise required by applicable law, AXALTA MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The information on this SDS relates only to the specific product identified in Section 1, Identification, and does not relate to its possible use in combination with any other material or in any specific process. If this product is to be used in combination with other products, Axalta encourages you to read and understand the SDS for all products prior to use.

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