

## Safety Data Sheet 3H311R5

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/18/2020 Version: 1.0

## **SECTION 1: Identification**

#### Identification

Product form : Substance

Substance name : (R)-2-Methylpiperidine

CAS No. 1722-95-8 Product code 3H31-1-R5 Formula : C6H13N Other means of identification : MFCD01862168

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

: Laboratory chemicals Use of the substance/mixture

Manufacture of substances

Scientific research and development

#### Details of the supplier of the safety data sheet

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#### **Emergency telephone number**

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## **SECTION 2: Hazard(s) identification**

#### 2.1. Classification of the substance or mixture

#### **Classification (GHS-US)**

Flam. Liq. 2 H225 - Highly flammable liquid and vapour

Acute Tox. 4 (Oral) H302 - Harmful if swallowed

Skin Corr. 1B H314 - Causes severe skin burns and eye damage

Eve Dam. 1 H318 - Causes serious eye damage STOT SE 3 H335 - May cause respiratory irritation

Full text of H-phrases: see section 16

## **Label elements**

## **GHS-US** labeling

Hazard pictograms (GHS-US)







GHS02

GHS05

GHS07

Signal word (GHS-US) : Danger

: H225 - Highly flammable liquid and vapor Hazard statements (GHS-US)

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eve damage

H335 - May cause respiratory irritation

Precautionary statements (GHS-US) P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical/ventilating/lighting equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge P260 - Do not breathe dust/fume/gas/mist/vapors/sprav

P264 - Wash skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301+P312 - If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

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skin with water/shower

P304+P340 - If inhaled: Remove person to fresh air and keep 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

P310 - Immediately call a POISON CENTER or doctor/ physician

P321 - Specific treatment (see supplemental first aid instructions on this label)

P330 - Rinse mouth

P363 - Wash contaminated clothing before reuse

P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

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

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

#### 2.3. Other hazards

Other hazards not contributing to the classification

: In use may form flammable/explosive vapor-air mixture.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## **SECTION 3: Composition/information on ingredients**

#### 3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	Classification (GHS-US)
(R)-2-Methylpiperidine (Main constituent)	(CAS No) 1722-95-8	<= 100	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-phrases: see section 16

#### 3.2. Mixture

Not applicable

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label

where possible). Move the affected personnel away from the contaminated area.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.

respiration. Get immediate medical advice/attention.

First-aid measures after skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get immediate

medical advice/attention.

First-aid measures after eye contact

: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse

mouth out with water. Get immediate medical advice/attention.

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

Symptoms/injuries

: The most important known symptoms and effects are described in the labelling (see section

2.2) and/or in section 11.

Symptoms/injuries after inhalation

: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

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

Treat symptomatically.

#### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Use extinguishing media appropriate for surrounding fire.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard

: Thermal decomposition generates: Carbon oxides. Nitrogen oxides.

Explosion hazard

: Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers. May form flammable/explosive vapor-air mixture.

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#### 5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

#### **SECTION 6: Accidental release measures**

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

General measures : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes,

vapor or spray.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground

level. Consider the risk of potentially explosive atmospheres. Eliminate every possible source of

ignition.

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.

Methods for cleaning up : Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use

explosion-proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel

spills into appropriate container for disposal. Ventilate area.

Other information : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

#### 6.4. Reference to other sections

No additional information available

#### SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal

ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from ignition sources (including static discharges). Proper grounding procedures to avoid static electricity should be

followed. Use only non-sparking tools.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or

smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use. Keep away from ignition sources. Air sensitive.

Moisture sensitive. Keep contents under inert gas.

Incompatible materials : Refer to Section 10 on Incompatible Materials.

Storage temperature : 2 - 8 °C Use explosion proof refrigerator

Storage area : Store in dry, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

## 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers

should be available in the immediate vicinity of any potential exposure.

Hand protection : Protective gloves. 29 CFR 1910.138: Hand Protection.

Eye protection : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.

Skin and body protection : Wear suitable protective clothing.

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Respiratory protection : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory

Protection.

Other information : Safety shoes. 29 CFR 1910.136: Foot Protection.

#### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available Odor : No data available Odor threshold No data available : No data available рΗ Melting point No data available Freezing point : No data available : 119 - 121 °C Boiling point Flash point 12 °C

Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : No data available : No data available **Explosion limits** : No data available Explosive properties Oxidizing properties No data available : No data available Vapor pressure No data available Relative density Relative vapor density at 20 °C : No data available Specific gravity / density : 0.845 g/ml Molecular mass 99.1741 g/mol Solubility : No data available : No data available Log Pow Auto-ignition temperature No data available Decomposition temperature No data available Viscosity No data available Viscosity, kinematic No data available Viscosity, dynamic : No data available

#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Keep away from heat, sparks and flame.

## 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

## **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

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Acute toxicity : Oral: Harmful if swallowed.

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated

exposure)

: Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough,

shortness of breath, headache, nausea.

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Waste treatment methods : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.

Waste disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Recycle the material as far as possible.

## **SECTION 14: Transport information**

#### **Department of Transportation (DOT)**

In accordance with DOT

Transport document description : UN2733 Amines, flammable, corrosive, n.o.s., 3, II

UN-No.(DOT) : UN2733

Proper Shipping Name (DOT) : Amines, flammable, corrosive, n.o.s.

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid

8 - Corrosive



Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 243

DOT Symbols : G - Identifies PSN requiring a technical name

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DOT Special Provisions (49 CFR 172.102)

: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the

MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 5 L

CFR 175.75)

**DOT Vessel Stowage Location** 

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

section is exceeded.

: 40 - Stow "clear of living quarters",52 - Stow "separated from" acids **DOT Vessel Stowage Other** 

Other information No supplementary information available.

#### **TDG**

No additional information available

## Transport by sea

UN-No. (IMDG) : 2733

Proper Shipping Name (IMDG) : AMINES, FLAMMABLE, CORROSIVE, N.O.S.

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : II - substances presenting medium danger

Air transport

UN-No. (IATA) : 2733

Proper Shipping Name (IATA) : Amines, flammable, corrosive, n.o.s.

Class (IATA) : 3 - Flammable Liquids Packing group (IATA) : II - Medium Danger

#### **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

(R)-2-Methylpiperidine CAS No 1722-95-8 100%

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

## 15.2. International regulations

#### CANADA

No additional information available

## **EU-Regulations**

No additional information available

#### **National regulations**

## (R)-2-Methylpiperidine (1722-95-8)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law)

#### 15.3. US State regulations

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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

#### **SECTION 16: Other information**

#### Full text of H-phrases:

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Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 2	Flammable liquids Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

NFPA health hazard

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

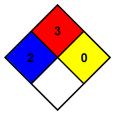
: 3 - Liquids and solids that can be ignited under almost all

ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.



**HMIS III Rating** 

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

given

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above

100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT

react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

#### SDS US (GHS HazCom 2012)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.

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