

Safety Data Sheet acc. to OSHA HCS

Printing Date 02/20/2020

Revision Number 4

Revision Date 09/04/2019

1 Identification

- **Product identifier**
- **Trade name:** Millennium Sprayable Single-Ply Bonding Adhesive
- **Article number:** 15268-1
- **Relevant identified uses of the substance or mixture.**
Industrial Use Only.
Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Royal Adhesives And Sealants, LLC
2001 W. Washington Street
South Bend IN 46628-2023
Information Phone Number: 574-246-5000
- **Information department:** Global Regulatory Department.
- **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.



GHS08 Health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

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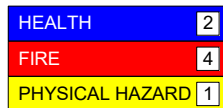
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· **Signal word** *Danger*· **Hazard statements***Extremely flammable aerosol.**Causes skin irritation.**Causes serious eye irritation.**May cause drowsiness or dizziness.**May be fatal if swallowed and enters airways.*· **Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**Do not spray on an open flame or other ignition source.**Pressurized container: Do not pierce or burn, even after use.**Avoid breathing dust/fume/gas/mist/vapors/spray**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Wear protective gloves / eye protection / face protection.**If swallowed: Immediately call a poison center/doctor.**Specific treatment (see on this label).**Do NOT induce vomiting.**If on skin: Wash with plenty of water.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Call a poison center/doctor if you feel unwell.**Take off contaminated clothing and wash it before reuse.**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Store in a well-ventilated place. Keep container tightly closed.**Store locked up.**Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Classification system:**· **NFPA ratings (scale 0 - 4)***Health = 2**Fire = 4**Reactivity = 1*· **HMIS-ratings (scale 0 - 4)***Health = 2**Fire = 4**Physical Hazard = 1*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization:** *Mixtures*· **Description:** *Mixture*

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Hazardous components:

79-20-9	methyl acetate	10-25%
110-82-7	cyclohexane	5-20%
67-64-1	acetone	5-20%
109-66-0	pentane	2.5-10%
124-38-9	carbon dioxide	2.5-10%
68476-85-7	Petroleum gases, liquefied	2.5-10%

4 First-aid measures

Description of first aid measures
After inhalation:

Call a doctor immediately.

Overexposure, remove to fresh air and seek medical attention.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse mouth with water.

Seek medical treatment.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:

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

CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents:

Water

Water and water with full jet

Special hazards arising from the substance or mixture

Avoid inhalation of material or combustion by-products.

No further relevant information available.

Advice for firefighters

Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Protective equipment: Protective clothing and respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

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- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

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

- **Methods and material for containment and cleaning up:**

Dispose of contaminated material as waste in accordance with federal state and local regulations.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

79-20-9	methyl acetate	250 ppm
110-82-7	cyclohexane	300 ppm
67-64-1	acetone	200 ppm
109-66-0	pentane	3000* ppm

- **PAC-2:**

79-20-9	methyl acetate	1,700 ppm
110-82-7	cyclohexane	1700* ppm
67-64-1	acetone	3200* ppm
109-66-0	pentane	33000*** ppm

- **PAC-3:**

79-20-9	methyl acetate	10000* ppm
110-82-7	cyclohexane	10000** ppm
67-64-1	acetone	5700* ppm
109-66-0	pentane	200000*** ppm

7 Handling and storage

- **Handling:**

- **Precautions for safe handling** Open and handle receptacle with care.

- **Information about protection against explosions and fires:**

Do not spray on a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Empty containers may contain hazardous residuals. Keep away from heat, sparks and open flame. DO NOT cut, drill, puncture, weld or grind on or near full, partially full or empty product containers.

Store in a cool location away from direct heat.

Observe official regulations on storing packagings with pressurized containers.

- **Information about storage in one common storage facility:**

Keep away from open flames and high temperatures.

Store away from oxidizing agents.

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- **Further information about storage conditions:**
 Keep away from heat, spark and flame.
 Keep receptacle tightly sealed.
 Do not gas tight seal receptacle.
 Store in cool, dry conditions in well sealed receptacles.
 Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

Control parameters

- **Components with limit values that require monitoring at the workplace:**

79-20-9 methyl acetate

PEL	Long-term value: 610 mg/m ³ , 200 ppm
REL	Short-term value: 760 mg/m ³ , 250 ppm Long-term value: 610 mg/m ³ , 200 ppm
TLV	Short-term value: 757 mg/m ³ , 250 ppm Long-term value: 606 mg/m ³ , 200 ppm

110-82-7 cyclohexane

PEL	Long-term value: 1050 mg/m ³ , 300 ppm
REL	Long-term value: 1050 mg/m ³ , 300 ppm
TLV	Long-term value: 344 mg/m ³ , 100 ppm

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm Long-term value: 594 mg/m ³ , 250 ppm BEI

109-66-0 pentane

PEL	Long-term value: 2950 mg/m ³ , 1000 ppm
REL	Long-term value: 350 mg/m ³ , 120 ppm Ceiling limit value: 1800* mg/m ³ , 610* ppm *15-min
TLV	Long-term value: 2950 mg/m ³ , 1000 ppm

124-38-9 carbon dioxide

PEL	Long-term value: 9000 mg/m ³ , 5000 ppm
REL	Short-term value: 54,000 mg/m ³ , 30,000 ppm Long-term value: 9000 mg/m ³ , 5000 ppm
TLV	Short-term value: 54,000 mg/m ³ , 30,000 ppm Long-term value: 9000 mg/m ³ , 5000 ppm

68476-85-7 Petroleum gases, liquefied

PEL	Long-term value: 1800 mg/m ³ , 1000 ppm
REL	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV	refer to Appendix F in TLVs&BEIs book; (D, EX)

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1309-48-4 magnesium oxide

PEL Long-term value: 15* mg/m³
fume; *total particulate

TLV Long-term value: 10* mg/m³
*as inhalable fraction

· **Ingredients with biological limit values:****67-64-1 acetone**

BEI 50 mg/L
Medium: urine
Time: end of shift
Parameter: Acetone (nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment (see listings below)**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

· **Protection of hands:**

Protective gloves

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

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

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

· **Material of gloves**

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

· **Eye protection:**

Safety glasses with side shields.



Tightly sealed goggles

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· **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Aerosol
Color:	Greenish
Odor:	Characteristic

· Change in condition

Boiling point:	36 °C (96.8 °F)
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Flash point:	-35 °C (-31 °F)
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Flammability (solid, gaseous):	Flammable
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Ignition temperature:	260 °C (500 °F)
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Auto igniting:	Product is not selfigniting.
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Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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· Flammable limits:

Lower:	1.2 Vol %
Upper:	16 Vol %

Vapor pressure at 20 °C (68 °F):	233 hPa (174.8 mm Hg)
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Specific gravity at 20 °C (68 °F):	0.856 g/cm ³ (7.14332 lbs/gal)
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· Solubility in / Miscibility with

Water:	Not miscible or difficult to mix.
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· Solvent content:

VOC (Per EPA 24)	<250 g/L
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Other information	No further relevant information available.
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10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** Heat, flames, sparks.

· Incompatible materials:

Reacts with oxidizing agents.

Reacts with acids.

Reacts with bases.

Reactive metals.

Nitrates

Chlorine and fluorine.

· Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides

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Hydrogen chloride (HCl)

Aldehydes

Acids

Hydrocarbons

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****110-82-7 cyclohexane**

Oral LD50 12,705 mg/kg (rat)

· **Primary irritant effect:**· **on the skin:** Skin irritant.· **on the eye:**

Causes serious eye irritation.

Vapors may be irritating to the eyes.

Irritating effect.

· **Sensitization:** Skin Contact - May cause allergic skin reaction.· **Additional toxicological information:**

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

Irritant

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Toxic for fish· **Additional ecological information:**· **General notes:**

At present there are no ecotoxicological assessments.

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.
Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number | UN3501 |
| · DOT, IMDG, IATA | |
| · UN proper shipping name | CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (METHYL ACETATE, PENTANES) |
| · DOT, IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 2 Gases |
| · Label | 2.1 |
| · IMDG, IATA | |
|  | |
| · Class | 2 Gases |
| · Label | 2.1 |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Product contains environmentally hazardous substances:
cyclohexane |
| · Marine pollutant: | Yes |
| · Special marking (ADR): | Symbol (fish and tree) |
| · Special precautions for user | Warning: Gases |

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· Stowage Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN 3501 CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (METHYL ACETATE, PENTANES), 2.1, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

110-82-7 cyclohexane

· **TSCA (Toxic Substances Control Act):**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

Please contact H.B. Fuller for more information regarding Proposition 65 on this product:
reg.request@hbfuller.com .

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

79-20-9	methyl acetate
110-82-7	cyclohexane
67-64-1	acetone
109-66-0	pentane
124-38-9	carbon dioxide

· **New Jersey Special Hazardous Substance List:**

79-20-9	methyl acetate	F3
110-82-7	cyclohexane	F3
67-64-1	acetone	F3
109-66-0	pentane	F4

· **Pennsylvania Right-to-Know List:**

79-20-9	methyl acetate
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110-82-7	cyclohexane	
67-64-1	acetone	
109-66-0	pentane	
124-38-9	carbon dioxide	
· Pennsylvania Special Hazardous Substance List:		
110-82-7	cyclohexane	E
67-64-1	acetone	E

· **Cancerogenity categories**· **EPA (Environmental Protection Agency)**

110-82-7	cyclohexane	I
67-64-1	acetone	I

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1	acetone	A4
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· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **National regulations:**· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:**

Global Regulatory Department.
reg.request@hbfuller.com

· **Creation Date:** 06/19/2019· **Contact:**

Please contact H.B. Fuller for more information regarding Proposition 65 on this product:
reg.request@hbfuller.com .

· **Date of preparation / last revision** 02/20/2020 / 3· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent

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*LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**BEI: Biological Exposure Limit**Flam. Aerosol 1: Aerosols – Category 1**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Asp. Tox. 1: Aspiration hazard – Category 1*

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