

Safety Data Sheet

PAPI™ 17 Polymeric MDI

Version 1.1

Revision Date: 02/03/2023

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PAPI™ 17 Polymeric MDI

Recommended use of the chemical and restrictions on use

Recommended use : Reserved for industrial and professional use.

Supplier or Repackaging Details

Company : Univar Solutions USA, Inc.
Address : 3075 Highland Pkwy Suite 200
 Downers Grove, IL 60515
 United States of America (USA)

Manufactured By : THE DOW CHEMICAL COMPANY

Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Responsible Party: Product Compliance Department
 E-mail: SDSNA@univarsolutions.com
 SDS Requests: 1-855-429-2661
 Website: www.univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2B

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

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

Specific target organ toxicity
 - repeated exposure : Category 2 (Respiratory system)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 + H320 Causes skin and eye irritation.
 H317 May cause an allergic skin reaction.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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H335 May cause respiratory irritation.
H373 May cause damage to organs (Respiratory system) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P285 In case of inadequate ventilation wear respiratory protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P362 Take off contaminated clothing and wash before reuse.
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.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical name	Weight percent
9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester	90 - 100
101-68-8	4,4'-methylenediphenyl diisocyanate	50 - 70

Actual concentration is withheld as a trade secret

Any Concentration shown as a range is due to batch variation.

Special Notes: : Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

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SECTION 4. FIRST AID MEASURES

- | | | |
|-------------------------|---|---|
| General advice | : | Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended. |
| If inhaled | : | Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice. |
| In case of skin contact | : | If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes. |
| In case of eye contact | : | Immediately flush eye(s) with plenty of water.
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 induce vomiting without medical advice.
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. |

SECTION 5. FIREFIGHTING MEASURES

- | | | |
|---|---|---|
| Suitable extinguishing media | : | Carbon dioxide (CO2)
Foam
Dry powder
Water mist |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during fire-fighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | No hazardous combustion products are known |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment 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.
Evacuate personnel to safe areas. |
| Environmental precautions | : | Prevent product from entering drains. |

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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 : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Prevent unauthorized access.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
101-68-8	4,4'-methylenediphenyl diisocyanate	TWA	0.005 ppm	ACGIH
		TWA	0.005 ppm 0.05 mg/m ³	NIOSH REL
		C	0.02 ppm 0.2 mg/m ³	NIOSH REL
		C	0.02 ppm 0.2 mg/m ³	OSHA Z-1
		C	0.02 ppm 0.2 mg/m ³	OSHA P0

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		C	0.02 ppm 0.2 mg/m ³	OSHA Z-1
		C	0.02 ppm 0.2 mg/m ³	OSHA P0
		TWA	0.005 ppm 0.05 mg/m ³	NIOSH REL
		C	0.02 ppm 0.2 mg/m ³	NIOSH REL
		PEL	0.005 ppm 0.051 mg/m ³	CAL PEL

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. In the case of vapour formation use a respirator with an approved filter.

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
Wear face-shield and protective suit for abnormal processing problems.

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 : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Colour : brown
Odour : musty
Odour Threshold : No data available
pH : No data available

Freezing Point : No data available
Boiling Point (Boiling point/boiling range) : 210 °C (410 °F)

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Flash point	: > 204 °C (399 °F) Method: ASTM D 93, closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: 8.5
Relative density	: 1.24 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	: No data available
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: > 600 °C
Thermal decomposition	: No data available
Explosive properties	: Not explosive

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Reacts with water Reacts violently with active metals.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Polymerization can occur. At temperatures below the boiling point of water, it is not considered hazardous. Heating can release hazardous gases. May cause of pressurized container break by the generated gas No decomposition if stored and applied as directed.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources. Exposure to moisture
Incompatible materials	: Avoid contact with: Copper galvanized metals Acids Alcohols Amines Ammonia solution Bases Metals oxidizers water

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

Components:

9016-87-9:

Acute oral toxicity : LD50 (Rat): 500 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): 0.49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

101-68-8:

Acute inhalation toxicity : LC50 (Rat): 10 mg/l
Assessment: The component/mixture is moderately toxic after short term inhalation.

Skin corrosion/irritation

Components:

9016-87-9:

Species: Rabbit
Result: Irritating to skin.

101-68-8:

Species: Rabbit
Result: Irritating to skin.
Test substance: Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Components:

9016-87-9:

Species: Rabbit
Result: Irritating to eyes.

101-68-8:

Species: Rabbit
Result: Irritating to eyes.
Test substance: Information given is based on data obtained from similar substances.

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Respiratory or skin sensitisation

Components:

9016-87-9:

Species: Guinea pig

Result: May cause sensitisation by skin contact.

Species: Guinea pig

Result: May cause sensitisation by inhalation.

101-68-8:

Test Type: Maximization test

Species: Guinea pig

Result: The product is a skin sensitiser, sub-category 1A.

Species: Guinea pig

Result: The product is a respiratory sensitiser, sub-category 1A.

Germ cell mutagenicity

Components:

9016-87-9:

Germ cell mutagenicity - Assessment : Mutagenicity classification not possible from current data

101-68-8:

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

Carcinogenicity

Product:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Components:

9016-87-9:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

101-68-8:

Species: Rat, (male and female)

Application Route: inhalation (dust/mist/fume)

Exposure time: 1 yr

Activity duration: 6 h

Dose: 0, 0.2, 1.0, 6.0 mg/m³

Frequency of Treatment: 5 days/week

NOAEL: 1 mg/m³

LOAEL: 6 mg/m³

Result: Animal carcinogen with unknown relevance to humans

Test substance: Information given is based on data obtained from similar substances.

Remarks: Category 2

Carcinogenicity - Assessment : Suspected human carcinogens

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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

Components:

9016-87-9:

Reproductive toxicity - Assessment

Fertility classification not possible from current data.

Teratogenicity - Assessment

: Embryotoxicity classification not possible from current data.

101-68-8:

Reproductive toxicity - Assessment

Fertility classification not possible from current data.

Teratogenicity - Assessment

: Embryotoxicity classification not possible from current data.

STOT - single exposure

Components:

9016-87-9:

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

101-68-8:

Target Organs: Respiratory system

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

STOT - repeated exposure

Components:

9016-87-9:

Exposure routes: Inhalation

Target Organs: Respiratory system

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

101-68-8:

Target Organs: Respiratory system

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated

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exposure, category 2.

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****9016-87-9:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Persistence and degradability**Components:****9016-87-9:**

Biodegradability : Remarks: Not readily biodegradable.

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

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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.

SECTION 14. TRANSPORT INFORMATION

DOT (Department of Transportation):

UN3082, Environmentally hazardous substances, liquid, n.o.s., (DIPHENYLMETHANE DIISOCYANATE), 9, III

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

Special Notes: : This material is shipped as a Class 9, Packing Group III when each package meets or exceeds the reportable quantity, otherwise it may be shipped as not regulated.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
4,4'-methylenediphenyl diisocyanate	101-68-8	5000	10000

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)
Acute toxicity (any route of exposure)

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

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

101-68-8 4,4'-methylenediphenyl diisocyanate

Clean Air Act

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The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

101-68-8 4,4'-methylenediphenyl diisocyanate

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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):

101-68-8 4,4'-methylenediphenyl diisocyanate

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

Massachusetts Right To Know

101-68-8 4,4'-methylenediphenyl diisocyanate

Pennsylvania Right To Know

9016-87-9 Isocyanic acid,
polymethylenepolyphenylene ester
101-68-8 4,4'-methylenediphenyl diisocyanate

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

TSCA : On TSCA Inventory

DSL : not determined

AICS : not determined

NZIoC : not determined

ENCS : not determined

KECI : not determined

PICCS : not determined

IECSC : not determined

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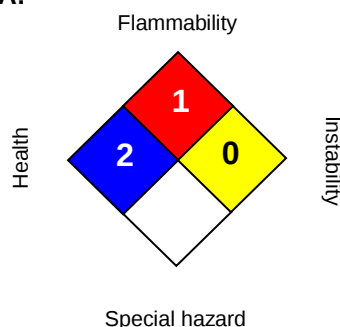
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SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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.

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Material number:
16204208,

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances

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MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		