

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 03/01/2016

Revision: 03/01/2016

1 Identification

- **Product identifier**
- **Trade name:** Millennium One Step Foamable Adhesive
- **Product code:** 410645
- **Recommended use and restriction on use**
- **Recommended use:** Assembly foam
- **Restrictions on use:** See Sections 8 and 10 for further information.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
CertainTeed Corporation
20 Moores Road
Malvern, PA 19355
610-893-6000
- **Emergency telephone number:**
CHEMTREC
1-800-424-9300 (US/Canada)
+01 703-527-3887 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Press. Gas H280 Contains gas under pressure; may explode if heated.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS04 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

diphenylmethanediisocyanate, isomeres and homologues
4,4'-methylenediphenyl diisocyanate
methylenediphenyl diisocyanate

· **Hazard statements:**

H280 Contains gas under pressure; may explode if heated.

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H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.








Precautionary statements:

P260 Do not breathe vapors.
 P284 In case of inadequate ventilation wear respiratory protection.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P314 Get medical advice/attention if you feel unwell.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P410+P403 Protect from sunlight. Store in a well-ventilated place.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Components:

9016-87-9	diphenylmethanediisocyanate, isomers and homologues  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
101-68-8	4,4'-methylenediphenyl diisocyanate  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
811-97-2	Norflurane  Press. Gas, H280 Simple Asphyxiant	10-30%
26447-40-5	methylenediphenyl diisocyanate  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	2.5-10%

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· **Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

· **After skin contact:**

Immediately remove any clothing soiled by the product.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation or rash occurs: Get medical advice/attention.
In cases of frostbite, rinse with plenty of water. Do not remove clothing.

· **After eye contact:**

Remove contact lenses if worn, if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Unlikely route of exposure.
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Asthma attacks
Headache
Breathing difficulty
Coughing
Dizziness
Allergic reactions
Frostbite
Irritant to skin and mucous membranes.
Irritant to eyes.
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.
Disorientation

· **Danger:**

Danger of impaired breathing.
May cause respiratory irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause damage to organs through prolonged or repeated exposure.

· **Indication of any immediate medical attention and special treatment needed:**

Treat skin and mucous membrane with antihistamine and corticoid preparations.
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
In cases of irritation to the lungs, initial treatment with Dexamethason metered aerosol.
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.
Medical supervision for at least 48 hours.

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If medical advice is needed, have product container or label at hand.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water fog / haze
 - Foam
 - Carbon dioxide
 - Gaseous extinguishing agents
 - Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
 - Formation of toxic gases is possible during heating or in case of fire.
 - Danger of receptacles bursting because of high vapor pressure if heated.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:**
 - Eliminate all ignition sources if safe to do so.
 - Cool endangered receptacles with water fog.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
 - Ensure adequate ventilation.
 - Wear protective equipment. Keep unprotected persons away.
 - Protect from heat.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Send for recovery or disposal in suitable receptacles.
- **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.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
 - Use only in well ventilated areas.
 - Avoid splashes or spray in enclosed areas.

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- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49 °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:**
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
- **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

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

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

PEL (USA)	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm
REL (USA)	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV (USA)	Long-term value: 0.051 mg/m ³ , 0.005 ppm
EL (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.01 ppm Skin; S
EV (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.02 ppm
LMPE (Mexico)	Long-term value: 0.005 ppm

811-97-2 Norflurane

WEEL (USA)	Long-term value: 1000 ppm
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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Engineering controls:** No relevant information available.
- **Breathing equipment:**



Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

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· **Protection of hands:**



Protective gloves

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

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

Avoid release to the environment.

· **Risk management measures** See Section 7 for additional information.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

· **Form:** Aerosol

· **Color:** Amber colored

· **Odor:** Faint, aromatic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not applicable, as aerosol.

· **Boiling point/Boiling range:** Not applicable, as aerosol.

· **Flash point:** 176 °C (349 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Not determined.

· **Explosion limits**

· **Lower:** Not determined.

· **Upper:** Not determined.

· **Oxidizing properties:** Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

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- | | |
|---------------------------------------------------|------------------------------------|
| · Evaporation rate: | Not applicable. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
Danger of receptacles bursting because of high vapor pressure if heated.
- **Possibility of hazardous reactions:** Reacts with strong acids and alkali.
- **Conditions to avoid:** Excessive heat.
- **Incompatible materials:** Oxidizers, strong bases, strong acids
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

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

Oral | LD50 | 2200 mg/kg (mouse)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** May cause sensitisation by inhalation and skin contact.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer):**

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues

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

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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- **Probable route(s) of exposure:**
Inhalation.
Eye contact.
Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
Harmful if inhaled.
Irritating to eyes, respiratory system and skin.
- **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** May cause respiratory irritation.
- **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Other adverse effects:** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN3500

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<ul style="list-style-type: none"> · UN proper shipping name · DOT, IATA · ADR · IMDG 	Chemical under pressure, n.o.s. (Norflurane, Isocyanate monomers and polymers) 3500 CHEMICAL UNDER PRESSURE, N.O.S. (Norflurane, Isocyanate monomers and polymers) CHEMICAL UNDER PRESSURE, N.O.S. (Norflurane, Isocyanate monomers and polymers)
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- **Transport hazard class(es)**

- **DOT**



<ul style="list-style-type: none"> · Class · Label 	2.2 2.2
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- **ADR**



<ul style="list-style-type: none"> · Class · Label 	2 5A Gases 2.2
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- **IMDG, IATA**



<ul style="list-style-type: none"> · Class · Label 	2 Gases 2.2
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<ul style="list-style-type: none"> · Packing group 	This UN-number is not assigned a packing group.
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- **Environmental hazards**

<ul style="list-style-type: none"> · Marine pollutant: 	No
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- **Special precautions for user**

<ul style="list-style-type: none"> · Danger code (Kemler): 	Warning: Gases 20
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- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 304 (emergency release notification):**

None of the ingredients are listed.

· **Sections 311/312 (hazardous chemical threshold planning quantity in pounds):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

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

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD

· **IARC (International Agency for Research on Cancer):**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3
101-68-8	4,4'-methylenediphenyl diisocyanate	3

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

None of the ingredients are listed.

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

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· **Canadian Ingredient Disclosure list (limit 0.1%):**

101-68-8	4,4'-methylenediphenyl diisocyanate
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· **Canadian Ingredient Disclosure list (limit 1%):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 03/01/2016 / -

· **Abbreviations and acronyms:**

ADR: 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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Press. Gas: Gases under pressure: Compressed gas

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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