

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 09/03/2015

Reviewed on 09/03/2015

1 Identification

- **Product identifier**
- **Trade name:** Touch n Foam Pro Foam Kit 15 Part A
- **Article number:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Polyurethane-sealant
- **Restrictions on use:** See Sections 8 and 10 for further information.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855
- **Information department:** Product Safety Department
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**

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

0 % of the mixture consists of component(s) of unknown toxicity.

- **Label elements**

- **GHS label elements**

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

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· **Hazard pictograms:**

GHS04 GHS07 GHS08

· **Signal word:** Danger· **Hazard-determining components of labeling:**

diphenylmethanediisocyanate, isomers and homologues
 4,4'-methylenediphenyl diisocyanate
 halogenated hydrocarbon

· **Hazard statements:**

H280 Contains gas under pressure; may explode if heated.
 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 mist/vapors/spray.
 P284 In case of inadequate ventilation wear respiratory protection.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves.
 P280 Wear eye protection / face 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+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 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.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system**· **NFPA ratings (scale 0 - 4)**

Health = 2
 Fire = 0
 Reactivity = 2

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· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = *2
FIRE	0	Fire = 0
REACTIVITY	2	Reactivity = 2

* - Indicates a long term health hazard from repeated or prolonged exposures.

· Other hazards

· Results of PBT and vPvB assessment:

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues <div> <div>⚠</div> Resp. Sens. 1, H334; STOT RE 2, H373 <div>⚠</div> Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 </div>	60-80%
101-68-8	4,4'-methylenediphenyl diisocyanate <div> <div>⚠</div> Resp. Sens. 1, H334; STOT RE 2, H373 <div>⚠</div> Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 </div>	20-40%
811-97-2	Norflurane <div> <div>⚠</div> Press. Gas, H280 Simple Asphyxiant </div>	10-20%
	halogenated hydrocarbon <div> <div>⚠</div> Flam. Liq. 2, H225 <div>⚠</div> Acute Tox. 4, H332 </div>	1-5%

· 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

· General information:

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure to call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

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- **After skin contact:**
Do not pull solidified product away from the skin.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Protect unharmed eye.
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
Do not remove contact lenses if worn.
- **After swallowing:**
Unlikely route of exposure.
Do not induce vomiting; immediately call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:**
Asthma attacks
Headache
Allergic reactions
Coughing
Breathing difficulty
Dizziness
- **Danger:**
Danger of impaired breathing.
Danger of pulmonary edema.
Danger of convulsion.
Danger of disturbed cardiac rhythm.
Condition may deteriorate with alcohol consumption.
- **Indication of any immediate medical attention and special treatment needed:**
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.
Monitor circulation, possible shock treatment.
Treat skin and mucous membrane with antihistamine and corticoid preparations.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapor pressure if heated.
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Carbon monoxide (CO)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.

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Wear fully protective suit.

- **Additional information:** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Remove persons from danger area.

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:**

Allow to solidify. Pick up mechanically.

Clean the affected area carefully; suitable cleaners are:

Warm water and cleansing agent

Dispose contaminated material as waste according to item 13.

- **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.

Take note of emission threshold.

Ensure good ventilation/exhaustion at the workplace.

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

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.

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

- **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.

Store in a cool location.

Provide ventilation for receptacles.

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

Store away from foodstuffs.

Do not store together with acids.

Store away from oxidizing agents.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

Protect from heat and direct sunlight.

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Store receptacle in a well ventilated area.

- **Specific end use(s):** No 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:

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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halogenated hydrocarbon

PEL (USA)	Long-term value: 790 mg/m ³ , 200 ppm
REL (USA)	Long-term value: 790 mg/m ³ , 200 ppm
TLV (USA)	Long-term value: 793 mg/m ³ , 200 ppm
EL (Canada)	Long-term value: 200 ppm
EV (Canada)	Short-term value: 990 mg/m ³ , 250 ppm Long-term value: 790 mg/m ³ , 200 ppm
LMPE (Mexico)	Long-term value: 200 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **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 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. 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

PVC gloves

Fluorocarbon rubber (Viton)

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.

· Not suitable are gloves made of the following materials: Natural rubber, NR

· Eye protection:

Contact lenses should not be worn.



Safety glasses

Goggles recommended during refilling.

· Body protection: Impervious protective clothing

· Limitation and supervision of exposure into the environment No relevant information available.

· Risk management measures

See Section 7 for additional information.

No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General information

· Appearance:

Form:

Aerosolized liquid with compressed gas in cylinders

Color:

Cream colored

· Odor:

Characteristic

· Odor threshold:

Not determined.

· pH-value:

Not determined.

· Change in condition:

Melting point/Melting range:

Undetermined.

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- | | |
|---|---|
| Boiling point/Boiling range: | Not applicable, as aerosol. |
| · Flash point: | Not applicable, as aerosol. |
| · Flammability (solid, gaseous): | Not applicable. |
| · Auto-ignition temperature: | 400 °C (752 °F) |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not self-igniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| · Vapor pressure at 20 °C (68 °F): | 5716 hPa (4287 mm Hg) |
| · Density at 20 °C (68 °F): | 1.03 g/cm ³ (8.595 lbs/gal) |
| · Relative density: | Not determined. |
| · Vapor density: | Not determined. |
| · 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:**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:**
Reacts with alcohols, amines, aqueous acids and alkalis.
Contact with acids releases toxic gases.
Danger of receptacles bursting because of high vapor pressure if heated.
Reacts with oxidizing agents.
Exothermic polymerization.
- **Conditions to avoid:** Store away from oxidizing agents.
- **Incompatible materials:** Contact with acids liberates toxic gas.
- **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Ammonia
Isocyanate

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Nitrogen oxides

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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:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

- Additional toxicological information:

Harmful

Irritant

- Carcinogenic categories

- NTP (National Toxicology Program):

None of the ingredients are listed.

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

None of the ingredients are listed.

- Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

- Repeated dose toxicity: Repeated exposures may result in skin and/or respiratory sensitivity.

- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

- 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: The product contains materials that are harmful to the environment.

- Persistence and degradability: The product is partially biodegradable. Significant residuals remain.

- Behavior in environmental systems

- Bioaccumulative potential: Does not accumulate in organisms

- Mobility in soil: No relevant information available.

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- **Additional ecological information**

- **General notes:**

This statement was deduced from products with a similar structure or composition.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

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:**

Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. Contact waste processors for recycling information.

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:**

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Disposal in accordance with official regulations.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1950

- **UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

- **DOT**

Aerosols

- **ADR**

1950 AEROSOLS

- **IMDG**

AEROSOLS

- **IATA**

Aerosols, non-flammable

- **Transport hazard class(es)**

- **DOT**



- **Class**

2 Gases

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· Label 2.2

· ADR



· Class 2 5A Gases

· Label 2.2

· IMDG, IATA



· Class 2 Gases

· Label 2.2

· Packing group Aerosols are not assigned a packing group.

· Environmental hazards

· Marine pollutant: No

· Special precautions for user Warning: Gases

· EMS Number: F-D,S-U

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

· Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

· UN "Model Regulation" UN1950, Aerosols, 2.2

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

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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

halogenated hydrocarbon

II

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

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues

3

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

3

• **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

• **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.

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

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

• **Canadian Ingredient Disclosure list (limit 1%):**

None of the ingredients are listed.

• **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

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- **Date of preparation / last revision** 09/03/2015 / -

- **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
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Press. Gas: Gases under pressure: Compressed gas
 Flam. Liq. 2: Flammable liquids, Hazard Category 2
 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**

SDS Prepared by:
 ChemTel Inc.
 1305 North Florida Avenue
 Tampa, Florida USA 33602-2902
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 Website: www.chemtelinc.com

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 09/04/2015

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1 Identification

- **Product identifier**
- **Trade name:** Touch n Foam Pro System 15 Part B
- **Article number:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Polymerization catalyst
- **Restrictions on use:** See Sections 8 and 10 for further information.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**

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

0 % of the mixture consists of component(s) of unknown toxicity.

- **Label elements**

- **GHS label elements**

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

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· **Hazard pictograms:**

GHS04 GHS07 GHS08

· **Signal word:** Danger· **Hazard-determining components of labeling:**

4,4'-methylenediphenyl diisocyanate
diglycidyl 1,2-cyclohexanedicarboxylate

· **Hazard statements:**

H280 Contains gas under pressure; may explode if heated.
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 dust/fume/gas/mist/vapors/spray.
P284 [In case of inadequate ventilation] wear respiratory protection.
P264 Wash thoroughly after handling.
P280 Wear protective gloves.
P280 Wear eye protection / face 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+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P312 Call a POISON CENTER/doctor if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
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.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system**· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 0
Reactivity = 2

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· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = *2
FIRE	0	Fire = 0
REACTIVITY	2	Reactivity = 2

- Other hazards
- Results of PBT and vPvB assessment:
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

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%
13674-84-5	tris(2-chlorisopropyl)-phosphate	10-25%
811-97-2	Norflurane ⚠ Press. Gas, H280 Simple Asphyxiant	10-25%
	halogenated hydrocarbon ⚠ Flam. Liq. 2, H225 ⚠ Acute Tox. 4, H332	2.5-10%
5493-45-8	diglycidyl 1,2-cyclohexanedicarboxylate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤ 2.5%

· Additional information:

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

- Description of first aid measures
- General information:
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
Supply fresh air.
Provide oxygen treatment if affected person has difficulty breathing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- After skin contact:
Do not pull solidified product away from the skin.

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Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

- **Information for doctor**

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

Dizziness

Gastric or intestinal disorders

Coughing

Allergic reactions

Breathing difficulty

Unconsciousness

- **Danger:**

Danger of impaired breathing.

Danger of disturbed cardiac rhythm.

Danger of convulsion.

May cause sensitisation by inhalation and skin contact.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause damage to organs through prolonged or repeated exposure.

Suspected of damaging fertility or the unborn child.

May cause respiratory irritation.

Irritating to eyes and skin.

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

Contains isocyanates. Consult literature for specific antidotes.

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

In cases of irritation to the lungs, initial treatment with corticoid steroid inhalants.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

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

- **For safety reasons unsuitable extinguishing agents:** None.

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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- **Additional information:** Cool endangered receptacles with water spray.

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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.
- **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Wash contaminated clothing before reuse.
- **Information about protection against explosions and fires:** Pressurized container: May burst if heated.
- **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.
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
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.
Store receptacle in a well ventilated area.
- **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

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

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· **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
------------	---------------------------

halogenated hydrocarbon

PEL (USA)	Long-term value: 790 mg/m ³ , 200 ppm
REL (USA)	Long-term value: 790 mg/m ³ , 200 ppm
TLV (USA)	Long-term value: 793 mg/m ³ , 200 ppm
EL (Canada)	Long-term value: 200 ppm
EV (Canada)	Short-term value: 990 mg/m ³ , 250 ppm Long-term value: 790 mg/m ³ , 200 ppm
LMPE (Mexico)	Long-term value: 200 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **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 and skin.
Do not inhale gases / fumes / aerosols.

· **Engineering controls:** Use only outdoors or in a well-ventilated area.

· **Breathing equipment:**



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

· **Protection of hands:**



Protective gloves

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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**

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:**

Contact lenses should not be worn.



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment** No relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No relevant information available.

9 Physical and chemical properties

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

- **General information**

- **Appearance:**

Form: Aerosolized liquid with compressed gas in cylinders

Color: Not determined.

- **Odor:** Sweetish

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition:**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Not determined.

- **Flash point:** Not determined.

- **Flammability (solid, gaseous):** Not determined.

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

- **Decomposition temperature:** Not determined.

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

- **Danger of explosion:** Product does not present an explosion hazard.

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- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Oxidizing properties** Not determined.
- **Vapor pressure at 20 °C (68 °F):** 5716 hPa (4287 mm Hg)
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **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:**
- **Thermal decomposition / conditions to be avoided:** Do not pierce or burn, even after use.
- **Possibility of hazardous reactions:**
 - Reacts with catalysts.
 - Reacts with peroxides.
 - Reacts with strong oxidizing agents.
 - Reacts with strong acids.
 - Exothermic polymerization.
- **Conditions to avoid:** Excessive heat.
- **Incompatible materials:** No relevant information available.
- **Hazardous decomposition products:**
 - Carbon monoxide and carbon dioxide
 - Phosphorus compounds
 - Chlorine compounds
 - Nitrogen oxides (NO_x)
 - Poisonous gases/vapors
 - Phosgene
 - Hydrogen chloride (HCl)

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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)

13674-84-5 tris(2-chlorisopropyl)-phosphate

Oral LD50 3600 mg/kg (rat)

halogenated hydrocarbon

Oral LD50 770 mg/kg (rat)

- 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.
Contains 4,4'-methylenediphenyl diisocyanate, diglycidyl 1,2-cyclohexanedicarboxylate. May produce an allergic reaction.
- Additional toxicological information:
Asphyxiant gas.
Danger through skin absorption.
Toxic and/or corrosive effects may be delayed up to 24 hours.

- Carcinogenic categories

- NTP (National Toxicology Program):

None of the ingredients are listed.

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

None of the ingredients are listed.

- Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- Acute effects (acute toxicity, irritation and corrosivity):

May cause sensitisation by inhalation and skin contact.
Irritating to eyes, respiratory system and skin.

- Repeated dose toxicity:

Repeated exposures may result in skin and/or respiratory sensitivity.
Possible risk of irreversible effects.

- 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.

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- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **Persistence and degradability:** The product is partially biodegradable. Significant residuals remain.
- **Behavior in environmental systems**
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
- **Additional ecological information**
- **General notes:**
This statement was deduced from the properties of the single components.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.
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:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packagings**
- **Recommendation:** Disposal in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA**
- **UN proper shipping name**

UN1950



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

- **DOT**
 - **ADR**
 - **IMDG**
 - **IATA**
- Aerosols
1950 AEROSOLS
AEROSOLS
Aerosols, non-flammable

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- Transport hazard class(es)

- DOT



- Class 2 Gases
- Label 2.2

- ADR



- Class 2 5A Gases
- Label 2.2

- IMDG, IATA



- Class 2 Gases
- Label 2.2
- Packing group This UN-number is not assigned a packing group.
- Environmental hazards
- Marine pollutant: No
- Special precautions for user Warning: Gases
- EMS Number: F-D,S-U
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- Transport/Additional information:
- ADR
- Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity
- UN "Model Regulation" UN 1950 AEROSOLS, 2.2

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.

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• **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):**

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):**

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

D, CBD

halogenated hydrocarbon

II

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

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

3

• **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

• **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.

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

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

• **Canadian Ingredient Disclosure list (limit 1%):**

None of the ingredients are listed.

• **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

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- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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** 09/04/2015 / -
- **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
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Press. Gas: Gases under pressure: Compressed gas
 - Flam. Liq. 2: Flammable liquids, Hazard Category 2
 - 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**
 - SDS Prepared by:
 - ChemTel Inc.
 - 1305 North Florida Avenue
 - Tampa, Florida USA 33602-2902
 - Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
 - Website: www.chemtelinc.com