

Safety Data Sheet
acc. to OSHA HCS

Printing Date 09/05/2019

Revision Number 1

Revision Date 09/05/2019

1 Identification

- **Product identifier**
- **Trade name: Powerhold 7950**
- **Relevant identified uses of the substance or mixture.**
Industrial Use Only.
Isocyanate
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Royal Adhesives & Sealants Canada Ltd
266 Humberline Drive - Toronto, Ontario, Canada M9W 5X1
Tel. +1 416-679-5676 Fax: +1 416-679-0511
- **Information department: Global Regulatory Department.**
- **Emergency telephone number:**
Emergency Telephone Number: CANUTEC Collect: (613) 996-6666 (24-hour hotline)

2 Hazard(s) identification

- **Classification of the substance or mixture**



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.

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



GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

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May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves / eye protection / face protection.

[In case of inadequate ventilation] wear respiratory protection.

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.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

HEALTH	2
FIRE	1
PHYSICAL HAZARD	1

Health = 2

Fire = 1

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:** Polyurethane

· **Hazardous components:**

101-68-8	4,4'-methylenediphenyl diisocyanate	≤2.5%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)	≤2.5%
4083-64-1	4-isocyanatosulphonyltoluene	≤2.5%

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Remove to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
- **After skin contact:**
Wipe excess from skin.
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.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **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.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
Closed containers may forcibly rupture under extreme heat or when contents are contaminated with water.
Carbon Dioxide (CO₂) is formed.
- **Advice for firefighters**
- **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
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Cover spilled material with neutralization solution (see below) and mix Wait 15 minutes. Collect material in open-head metal containers. Repeat neutralization and cleaning process until surface is decontaminated. Apply drum lid but DO NOT secure. Allow containers to vent for 72 hours to let carbon dioxide escape.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
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.
- **Protective Action Criteria for Chemicals**

- **PAC-I:**

	Polyether Polyol	30 mg/m ³
101-68-8	4,4'-methylenediphenyl diisocyanate	0.45 mg/m ³

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9016-87-9	diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)	0.15 mg/m ³
· PAC-2:		
	Polyether Polyol	330 mg/m ³
101-68-8	4,4'-methylenediphenyl diisocyanate	5 mg/m ³
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)	3.6 mg/m ³
· PAC-3:		
	Polyether Polyol	2,000 mg/m ³
101-68-8	4,4'-methylenediphenyl diisocyanate	55 mg/m ³
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)	22 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Product reacts with water. Reaction may produce heat and/or gases. Container may rupture from gas generation in a fire situation. This reaction may be violent.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep containers tightly closed when not in use. Protect from atmospheric moisture.
- **Information about storage in one common storage facility:** Store away from water.
- **Further information about storage conditions:**
Protect from humidity and water.
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

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

PEL	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm
REL	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	Long-term value: 0.051 mg/m ³ , 0.005 ppm

- **Additional information:**
MDI products have poor warning properties, since recognition of an odor is far above the TLV. Observe OSHA regulations for respirator use (29 CFR 1910.134).
The lists that were valid during the creation were used as basis.

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- **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 and skin.
- **Breathing equipment:**
 Airborne MDI concentrations greater than the ACGIH TLV-TWA or OSHA PEL can occur in inadequately ventilated environments when MDI is sprayed or heated. In such cases respiratory protection is require.
 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.

- **Material of gloves**
 Butyl rubber, BR
 Chloroprene rubber, CR
 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.
- **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

Use full face shield over protective eye wear when there is a risk of a splash.

- **Body protection:**
 Apron
 Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Brown
Odor:	Characteristic
Odor threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point:	Undetermined.
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· Boiling point: · Flash point:	> 93 °C (>199.4 °F)
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor pressure:	Not determined.
· Specific gravity at 20 °C (68 °F):	1.6 g/cm ³ (13.352 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: · Dynamic: · Kinematic:	Not determined. Not determined.
· Solvent content: · Organic solvents:	0.0 %
· Solids content: · Other information	Not available. VOC = 0%

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
- **Possibility of hazardous reactions**
Violent reaction with water at high temperatures.
May produce violent reactions with bases and numerous organic substances including alcohols and amines.
MDI reacts slowly with water to form Carbon Dioxide gas. This gas can cause sealed containers to expand and possibly rupture. Contact with moisture, other materials that react with isocyanates, or temperatures above 350F, may cause polymerization.
- **Conditions to avoid**
Exposure to high temperatures.
Moisture
- **Incompatible materials:**
Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols.
Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water.
May produce violent reactions with bases and numerous organic substances including alcohols and amines.
Copper and copper alloys.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

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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	2,200 mg/kg (mouse)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitization:**

- *Inhalation - Sensitization possible through inhalation.*

- *Skin Contact - Sensitization possible through skin contact.*

- **Additional toxicological information:**

- *May cause allergic respiratory reaction.*

Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. Use skin protection.

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

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

Harmful

Irritant

- **Carcinogenic categories**

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

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

- **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.

- **Additional ecological information:**

- **General notes:** At present there are no ecotoxicological assessments.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | MDI (CAS 101-68-8) exhibits a CERCLA RQ equal to 5,000 pounds. Quantities less than the RQ amount are not regulated in transportation. |
| · UN "Model Regulation": | not regulated |

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):

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

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)

· TSCA (Toxic Substances Control Act):

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

· Hazardous Air Pollutants

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

· Proposition 65

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

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· **(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:**

1317-65-3	Limestone
101-68-8	4,4'-methylenediphenyl diisocyanate
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues (polymer exempt)

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

None of the ingredients is listed.

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

1317-65-3	Limestone
101-68-8	4,4'-methylenediphenyl diisocyanate

· **Pennsylvania Special Hazardous Substance List:**

101-68-8	4,4'-methylenediphenyl diisocyanate	E
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· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

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

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

None of the ingredients listed.

· **MAK (German Maximum Workplace Concentration)**

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

· **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:** 07/21/2015

· **Date of preparation / last revision** 09/05/2019 / -

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Code for Dangerous Goods

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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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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