

SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200

TOOLWAY Spray Adhesive 460ml

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Version: 1.3

1. IDENTIFICATION**A. Product name**

TOOLWAY Spray Adhesive 460ml

B. Recommended use and restriction on use

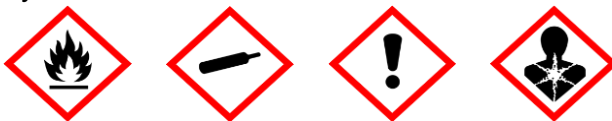
- General use : Adhesion
- Restriction on use : Restrictions on the use of closed areas and firearms

C. Manufacturer / Supplier / Distributor information☐ **Manufacturer information**

- Company name : Toolway Industries Ltd
- Address : 280 Hunter's Valley Rd #1, Woodbridge, ON L4H 3V9
- Emergency telephone number : (905) 326-5450

2. HAZARD IDENTIFICATION**A. GHS Classification**

- Aerosols : Category2
- Gases under pressure : Liquefied gas
- Flammable liquids : Category4
- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category2
- Reproductive toxicity : Category2
- Aspiration hazard : Category1
- Chronic aquatic toxicity : Category1

B. GHS label elements☐ **Hazard symbols**☐ **Signal words**

- Danger

☐ **Hazard statements**

- H223 Flammable aerosol
- H227 Combustible liquid
- H229 Pressurised container: May burst if heated
- H280 Compressed gas ; Contains gas under pressure; may explode if heated
- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H361 Suspected of damaging fertility or the unborn child
- H410 Very toxic to aquatic life with long lasting effects

☐ **Precautionary statements****1) Prevention**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Pressurized container: Do not pierce or burn, even after use.
- P264 Wash hands thoroughly after handling.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

2) Response

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P321 Specific treatment (if in eyes, wash with plenty of running water; if in contact with skin, wash with plenty of running water; if inhaled, move to fresh air; if ingested, seek medical advice on whether to induce vomiting).
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).
- P391 Collect spillage.

3) Storage

- P403 Store in a well-ventilated place.
- P405 Store locked up.
- P410+P403 Protect from sunlight. Store in a well-ventilated place.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification

- Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Hexahydrobenzene	Benzenehexahydride ; Hexahydrobenzene ; Hexamethylene ; Hexanaphthene ; Cyclohexane	110-82-7	22 ~ 27
2-Methylpentane	Pentane, 2-methyl- ; 1,1-Dimethylbutane ; Isohexane ;	107-83-5	15 ~ 18
Benzene, 1,3-diethenyl-, polymer with 1,3-butadiene and ethenylbenzene	buta-1,3-diene	26471-45-4	13 ~ 16
Oxybismethane	Methane, 1,1'-oxybis- ; Methane, oxybis- ; Methoxymethane ; Dimethyl oxide ; Methyl ether ; Oxybismethane ; Methyl oxide ;	115-10-6	12 ~ 15
2-Methylpropane	Propane, 2-methyl- ; 1,1-Dimethylethane ; i-Butane ; iso-Butane ; Trimethylmethane ;	75-28-5	7 ~ 13
Resin acids and Rosin acids, esters with glycerol	STAYBELITE ESTER 10	8050-31-5	8 ~ 11
Propane	Dimethylmethane ; Propyl hydride ; n-Propane ; Propyldihydride ;	74-98-6	7 ~ 8

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Accidental contact with liquefied gas or refrigerated liquefied gas may cause burn, severe mayhem and perfrigeration, so please take emergency medical action.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- In case of accidental contact with liquefied gas or refrigerated liquefied gas, warm up the contact part with lukewarm water.
- Wash thoroughly after handling.

C. Inhalation contact

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.
- If swallowed, large amounts of water to drink and do not induce vomiting.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES**A. Suitable (Unsuitable) extinguishing media**

- Avoid use of water jet for extinguishing
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

B. Specific hazards arising from the chemical

- Causes serious eye irritation
- Causes skin irritation
- Combustible liquid
- Compressed gas ; Contains gas under pressure; may explode if heated
- Flammable aerosol

C. Special protective actions for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.

6. ACCIDENTAL RELEASE MEASURES**A. Personal precautions, protective equipment and emergency procedures**

- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.

B. Environmental precautions

- If large amounts have been spilled, inform the relevant authorities.
- Prevent runoff and contact with waterways, drains or sewers.

C. Methods and materials for containment and cleaning up

- Appropriate container for disposal of spilled material collected.
- Dike for later disposal.
- Disposal of waste shall be in compliance with the Wastes Control Act
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.

7. HANDLING AND STORAGE**A. Precautions for safe handling**

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.
- Do not apply direct heat.
- Do not use damaged containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**A. Exposure limits****○ ACGIH TLV**

- [Hexahydrobenzene] : TWA, 100 ppm (350 mg/m³)
- [2-Methylpentane] : TWA, 500 ppm (1760 mg/m³) STEL, 1000 ppm (3500 mg/m³)
- [2-Methylpropane] : STEL 1000 ppm
- [Propane] : Asphyxia

○ OSHA PEL

- [Hexahydrobenzene] : 300 ppm, 1050 mg/m³
- [Propane] : 1000 ppm, 1800 mg/m³

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment**○ Respiratory protection**

- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Consider warning properties before use.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Respiratory protection is ranked in order from minimum to maximum.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

○ Eye protection

- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

○ Hand protection

- Wear appropriate chemical resistant glove.
- ☐ **Skin protection**
 - Wear appropriate chemical resistant protective clothing.
- ☐ **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid
- Color	Not available
B. Odor	Not available
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity(Relative density)	Not available
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- high-pressure gas; May explode when heated.

B. Possibility of hazardous reactions

- Contact with other combustible material may cause fire.

C. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.
- Avoid contact with heat, sparks, flame or other ignition sources.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- ☐ **Respiratory tracts**
 - May be fatal if swallowed and enters airways
- ☐ **Oral**
 - Not available
- ☐ **Eye-Skin**
 - Causes skin irritation

B. Delayed and immediate effects and also chronic effects from short and long term exposure

○ Acute toxicity

* Oral

- Product (ATEmix) : >5000mg/kg
- [Hexahydrobenzene] : LD50 > 5000 mg/kg Rat (OECD TG 401) (ECHA)
- [2-Methylpentane] : LD50 15840 mg/kg Rat (ECHA)
- [Resin acids and Rosin acids, esters with glycerol] : LD50 > 2000 mg/kg Rat

* Dermal

- Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
- [Hexahydrobenzene] : LD50 > 2000 mg/kg Rabbit (OECD TG 402) (ECHA)

* Inhalation

- Product (ATEmix) : >50.0mg/L, Vapour, 4hr
- [Hexahydrobenzene] : Vapor LC50 > 32.88 mg/L 4 hr Rat No death Not classified (OECD TG 403) (ECHA)
- [2-Methylpentane] : Vapor LC50 > 20 mg/L 4 hr Rat Not classified (OSHRI Risk Assessment, 2010)
- [Oxybismethane] : gas LC50 163619 ppm/4 hr Rat (308.5 mg/L/4H)(IUCLID)
- [2-Methylpropane] : Gas LC50 > 200000 ppm 4 hr (>800000 ppm 15 min) Rat Not classified (ECHA)
- [Propane] : Gas LC50 > 38890 ppm 4 hr (> 55000 ppm 2 hr) Guinea pig Not classified (ACGIH) (NITE)

○ Skin corrosion/irritation

- Causes skin irritation

○ Serious eye damage/irritation

- Causes serious eye irritation

○ Respiratory sensitization

- Not available

○ Skin sensitization

- Not available

○ Carcinogenicity

* IARC

- Not available

* OSHA

- Not available

* ACGIH

- Not available

* NTP

- Not available

* EU CLP

- [2-Methylpropane] : Carc.1A (isobutane (containing ≥ 0.1% butadiene (203-450-8)))

○ Germ cell mutagenicity

- Not available

○ Reproductive toxicity

- Suspected of damaging fertility or the unborn child

○ STOT-single exposure

- Not available

○ STOT-repeated exposure

- Not available

○ Aspiration hazard

- May be fatal if swallowed and enters airways

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

○ Fish

- [Hexahydrobenzene] : LC50 4.53 mg/L 96 hr Pimephales promelas (OECD TG 203)(ECHA)
- [Resin acids and Rosin acids, esters with glycerol] : LC50 > 400 mg/l 96 hr (IUCLID)

○ Crustaceans

- [Hexahydrobenzene] : EC50 0.9 mg/L 48 hr Daphnia magna (OECD TG 202)(ECHA)
- [Resin acids and Rosin acids, esters with glycerol] : EC50 259 mg/l 48 hr (IUCLID)

○ Algae

- [Hexahydrobenzene] : EC50 9.317 mg/L 72 hr, NOEC 0.952 mg/L Raphidocelis subcapitata (OECD TG 201, GLP)(ECHA)
- [Resin acids and Rosin acids, esters with glycerol] : EC50 > 1000 mg/ℓ 72 hr (IUCLID)

B. Persistence and degradability

○ Persistence

- [Hexahydrobenzene] : log Pow 3.44 (25 °C) (ECHA)
- [Benzene, 1,3-diethenyl-, polymer with 1,3-butadiene and ethenylbenzene] : log Kow not available
- [Oxybismethane] : log Kow 0.1 (ICSC)
- [2-Methylpropane] : log Pow 1.09 (Read-across CAS No. 74-82-8) (ECHA)
- [Resin acids and Rosin acids, esters with glycerol] : log Kow < 1.5 (IUCLID)

○ Degradability

- Not available

C. Bioaccumulative potential

○ Bioaccumulative potential

- [2-Methylpentane] : BCF 100 ~ 408 (HSDB)

○ Biodegradation

- [Hexahydrobenzene] : Readily biodegradable, 77 % 28 d (O₂ consumption) (OECD TG 301 F, GLP) (ECHA)
- [2-Methylpentane] : Readily biodegradable (OECD TG 301 C, GLP) (ECHA)
- [Oxybismethane] : 5 (%) 28 day (IUCLID)
- [2-Methylpropane] : Readily biodegradable (ECHA)

D. Mobility in soil

- [Oxybismethane] : Koc 27 (NLM/HSDB)

E. Other adverse effects

- [Hexahydrobenzene] : Acute aquatic cat.1, Chronic aquatic cat.1 (EU Harmonized)
- [2-Methylpentane] : Chronic aquatic cat.2 (EU Harmonized)

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- 1950

B. Proper shipping name

- AEROSOLS

C. Hazard Class

- 2.1

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-D (Flammable gases)
- EmS SPILLAGE SCHEDULE : S-U (Gases (flammable, toxic or corrosive))

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- **POPs Management Law**
 - [Hexahydrobenzene] : Not applicable
 - [2-Methylpentane] : Not applicable
 - [Benzene, 1,3-diethenyl-, polymer with 1,3-butadiene and ethenylbenzene] : Not applicable
 - [Oxybismethane] : Not applicable
 - [2-Methylpropane] : Not applicable
 - [Resin acids and Rosin acids, esters with glycerol] : Not applicable
 - [Propane] : Not applicable
- **Information of EU Classification**
 - * **Classification**
 - [Hexahydrobenzene] : H225,H304,H315,H336,H400,H410
 - [2-Methylpentane] : H225,H304,H315,H336,H411
 - [Oxybismethane] : H220,H280
 - [2-Methylpropane] : H220,H280,H340,H350
 - [Propane] : H220,H280
- **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29CFR1910.119)**
 - Not applicable
 - * **CERCLA Section 103 (40CFR302.4)**
 - [Hexahydrobenzene] : 453.599 kg 1000 lb
 - * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable
 - * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable
 - * **EPCRA Section 313 (40CFR372.65)**
 - [Hexahydrobenzene] : Applicable
- **Rotterdam Convention listed ingredients**
 - Not applicable
- **Stockholm Convention listed ingredients**
 - Not applicable
- **Montreal Protocol listed ingredients**
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2024-09-11

C. Revision number and Last date revised

- 3 times, 2024-09-13

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).