

**Safety Data Sheet**  
**according to HPR, Schedule 1**

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

**1 Identification**

- **Product identifier**
- **Trade name:** 1-EP70-A
- **CAS Number:**  
1761-71-3
- **Other means of identification**
- **EC number:**  
217-168-8
- **Application of the substance / the mixture** Adhesives
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Hottinger Brüel & Kjaer GmbH  
Im Tiefen See 45  
D-64293 Darmstadt  
Germany  
Tel: +49 6151 803 0  
E-Mail: [info@hbkworld.com](mailto:info@hbkworld.com)  
<https://www.hbkworld.com>
- **Information department:**  
Tel. +49(0)6131 19240  
EMail [support-esa@hbkworld.com](mailto:support-esa@hbkworld.com)
- **Emergency telephone number:**  
Canada:  
+1 800 332 1414 (Alberta, NW Territories);  
+1 866 454 1212 (Saskatchewan);  
+1 403 944 1414 (Calgary, outside Alberta, VOIP users)  
Poison and Drug Information Services  
Foothills Medical Centre  
1403 29th Street N.W.  
T2N 2T9 Calgary  
  
National Capital Poison Center, U.S.A.:  
1-800-222-1222  
3201 New Mexico Ave Ste 310  
20016 Washington, DC  
USA  
CHEMTREC: +1 703-741-5970 (24h emergency call).  
Outside continental USA please call CHEMTREC at +1-703-527-3887 (R-calls are accepted).

**2 Hazard identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Specific target organ toxicity (repeated exposure) – H373 May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 2)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 1)



GHS05 Corrosion

Skin Corrosion - Category 1B

H314 Causes severe skin burns and eye damage.

Eye damage/irritation – Category 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4

H302 Harmful if swallowed.

Sensitization - skin – Category 1

H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS05

GHS07

GHS08

- **Signal word** Danger

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

4,4'-Methylenebis(cyclohexylamine)

- **Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

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

- **Precautionary statements**

P260 Do not breathe mist/vapors/spray.

P280 Wear protective gloves / eye protection / face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

Please refer to additional labeling elements in Section 15 of this Safety Data Sheet, if applicable.

### 3 Composition/Information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

1761-71-3 4,4'-Methylenebis(cyclohexylamine)

(Contd. on page 3)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 2)

- **Identification number(s)**
- **EC number:** 217-168-8

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing contaminated by the product.  
Personal protection for the First Aider.
- **After inhalation:**  
In case of unconsciousness place patient stably in side position for transportation.  
If symptoms persist consult doctor.
- **After skin contact:**  
Immediately rinse with water.  
In case of permanent aches and pains please go and see the doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Remove contact lenses if possible.  
Protect unharmed eye.
- **After swallowing:**  
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**  
skin irritation  
eye irritation
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Use fire fighting measures that suit the environment.  
Alcohol-resistant foam, extinguishing powder or carbon dioxide. Fight larger fire with water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
Inhalation of combustion gases may cause serious health hazards.  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NOx)  
corrosive vapours  
Formaldehyde.  
Formation of flammable mixtures of vapours with air possible.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Remove goods in stock from incendiary zone, if possible.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

CA  
(Contd. on page 4)

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 3)

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **For non-emergency personnel** Avoid contact with the product.
- **For emergency responders** Put on suitable personal protective equipment.
- **Environmental precautions:** Do not allow to enter drainage system, ground/soil and water bodies.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 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

- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Do not eat, drink, smoke or sniff while working.  
Put on suitable personal protective equipment.  
Avoid contact with eyes, skin and clothes.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep container tightly closed and store upright to prevent any spill of product.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/ Personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.  
Wash contaminated clothing before re-use.

(Contd. on page 5)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 4)

- **Breathing equipment:**  
*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

- **Protection of hands:**



Protective gloves

*Only use chemical-protective gloves with CE-labeling of category III.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
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.*

*Butyl rubber, BR*

*Nitrile rubber, NBR*

*Neoprene gloves*

- **Penetration time of glove material**

*The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*

- **Eye protection:**



Safety goggles according to EN 166.



Face protection

- **Body protection:**



Protective work clothing

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

*Avoid the uncontrolled release into the environment.*

## 9 Physical and chemical properties

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

- **General Information**

- **Physical state**

Liquid

- **Color:**

Yellowish

- **Odor:**

Amine-like

- **Odor threshold:**

Not determined.

- **Melting point/Melting range:**

-17.7 °C

- **Boiling point/Boiling range:**

320 °C

- **Flammability:**

Not applicable.

(Contd. on page 6)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 5)

- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** 160 °C
- **Auto igniting:** 300 °C
- **Decomposition temperature:** Not determined.
- **SADT**
- **pH-value:** 11.6  
The product has an extreme pH  $\geq 11.5$ , but should still not be considered corrosive. See also note in section 11.
  
- **Viscosity:**
- **Kinematic:** Not determined.
- **Dynamic at 20 °C:** 80 mPas
- **Solubility in / Miscibility with**
- **Water at 20 °C:** 12.3 g/l
- **Segregation coefficient (n-octanol/water):** Not determined.
- **Vapor pressure at 20 °C:** 0.00055 hPa
- **Density at 20 °C:** 0.96 g/cm<sup>3</sup>
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Particle characteristics** No further details.
  
- **Other information**
- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Change in condition**
- **Evaporation rate** Not determined.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
None in case of intended use and storage in compliance with instructions.

CA

(Contd. on page 7)

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 6)

### 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

- LD/LC50 values that are relevant for classification:

#### ATE (Acute Toxicity Estimate)

Oral	LD50	380 mg/kg (Rat)
------	------	-----------------

#### 1761-71-3 4,4'-Methylenebis(cyclohexylamine)

Oral	LD50	380 mg/kg (Rat)
------	------	-----------------

Dermal	LD50	2,110 mg/kg (Rabbit)
--------	------	----------------------

- **Primary irritant effect:**
  - **on the skin:** Caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)** Substance is not listed.
  - **NTP (National Toxicology Program)** Substance is not listed.

### 12 Ecological information

- Toxicity

- Aquatic toxicity:

#### 1761-71-3 4,4'-Methylenebis(cyclohexylamine)

EC50	7.64 mg/l/48h (Daphnia magna)
------	-------------------------------

LC50	> 100 mg/l/96h (fish)
------	-----------------------

- **Persistence and degradability** No further relevant information available.
- **Other information:** There are no data available about the preparation.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (Assessment by list): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

(Contd. on page 8)

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 7)

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Dispose of packaging according to regulations on the disposal of packagings.  
Non contaminated packagings can be used for recycling.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

### 14 Transport information

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT/TDG, ADR, IMDG, IATA</b></li> </ul>   | UN2735   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT/TDG</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p>Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexylamine))</p> <p>2735 Amines, liquid, corrosive, n.o.s. (4,4'-methylenebis(cyclohexylamine))</p> <p>AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-methylenebis(cyclohexylamine))</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT/TDG (Transport dangerous goods):</b></li> </ul>                    |  |
| <div style="text-align: center;"> </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>                               | <p>8 Corrosive substances</p> <p>No hazardous good</p> <p>8</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR</b></li> </ul>  |  |
| <div style="text-align: center;"> </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>                               | <p>8 (C7) Corrosive substances</p> <p>8</p>  |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>   |  |
| <div style="text-align: center;"> </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> </ul>   | <p>8 Corrosive substances</p>  |

(Contd. on page 9)

CA

# Safety Data Sheet

## according to HPR, Schedule 1


Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

Trade name: 1-EP70-A

(Contd. of page 8)

· <b>Label</b>	8
· <b>IATA</b>	
	
· <b>Class</b>	8 Corrosive substances Not Restricted
· <b>Label</b>	8
· <b>Packing group</b>	
· <b>DOT/TDG, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT/TDG</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Hazard identification number (Kemler code):</b>	80
· <b>EMS Number:</b>	F-A, S-B
· <b>Segregation groups</b>	(SGG18) Alkalis
· <b>Stowage Category</b>	A
· <b>Segregation Code</b>	SG35 Stow "separated from" SGG1-acids
· <b>UN "Model Regulation":</b>	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)), 8, II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.

(Contd. on page 10)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

**Trade name: 1-EP70-A**


(Contd. of page 9)

- **Canadian Non-Domestic Substances List (NDSL)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is not listed.
- **Per- and polyfluoroalkyl substances (PFAS)** Substance is not listed.
- **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.*

· **Department issuing SDS:**

 **DEKRA** This Safety Data Sheet has been drawn up in cooperation with:  
DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,  
phone: (+49) 511 42079 - 0, reach@dekra.com.

© DEKRA Assurance Services GmbH. Changing this documents is subject to explicit acceptance by DEKRA Assurance Services GmbH.

· **Kit-Components:**

· **Date of preparation** 08/31/2025

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· **\* Data compared to the previous version altered.**

CA