

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

SECTION 1: Identification of the substance/preparation and of the company/undertaking

1.1. Product identifier

Trade name: MEDIUM HARDENER

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Hardener for epoxy resin.

1.3. Details of the supplier of the safety data sheet

Supplier

Company: SACPRO AB
Address: Källviksvägen 10
Zip code: 791 52
City: Falun
Country: SWEDEN
E-mail: info@sacpro.se
Phone: +46 23 79 06 50

1.4. Emergency Telephone Number

Members of the public: 111 (NHS 111 (Scotland: NHS 24))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Acute Tox. 4;H302 Skin Corr. 1B;H314 Skin Sens. 1;H317 Aquatic Chronic 2;H411**Most serious harmful effects:** Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Pictograms

**Signal word:** Danger

Contains

Substance: Styrenerad fenol ; bicyklo[2.2.1]heptanebis(metylamine); 1,3-Benzenedimethanamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine

H-phrases

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.

P-phrases

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P501 Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

When mixing two components, consult the safety data sheets for both components.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No	EC No	REACH Reg. No.	Concentration	Notes	CLP-classification
Styrenerad fenol	61788-44-1	262-975-0	01-2119980970-27	30 - 60%		Skin Irrit. 2;H315 Skin Sens. 1;H317 Aquatic Chronic 2;H411
1,3-Benzenedimethanamine	1477-55-0	216-032-5		10 - 30%		Acute Tox. 4;H302 Skin Corr. 1B;H314 Skin Sens. 1;H317 Acute Tox. 4;H332 Aquatic Chronic 3;H412
bicyklo[2.2.1]heptanebis(metylamine)	56602-77-8	260-280-7		10 - 30%		Acute Tox. 4;H302 Skin Corr. 1C;H314 Aquatic Chronic 3;H412
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	220-666-8		10 - 30%		Acute Tox. 4;H302 Acute Tox. 4;H312 Skin Corr. 1B;H314 Skin Sens. 1;H317 Aquatic Chronic 3;H412

Please see section 16 for the full text of H-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. Seek medical advice immediately.

Skin contact: Wash skin with soap and water. Do not use organic solvents. Take off contaminated clothing and wash before reuse. Seek medical advice in case of persistent discomfort.

Eye contact: Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.

General: Eye wash facilities must be available when handling this product.

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019
Version: 1.0.1

4.2. Most important symptoms and effects, both acute and delayed

May cause serious, possibly permanent, corrosion damage to the eyes. The product is corrosive. Contact with the skin may cause irritation and allergic contact eczema.

4.3. Indication of any immediate medical attention and special treatment needed

Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam, carbon dioxide or water mist.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Not flammable, but can sustain combustion. Hazardous fumes are formed in fire conditions. Nitrous gases/ Carbon monoxide and carbon dioxide.

5.3. Advice for fire-fighters

Firefighters exposed to combustion gases/decomposition products should use a respiratory protective device.

Other Information: Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Keep unnecessary people away, isolate hazard area and deny entry. Wear suitable protective clothing. Wear safety goggles if there is a risk of eye splash.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water. Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers.

6.4. Reference to other sections

See section 8 for information on exposure controls and personal protection. See section 7 for handling and storage. See section 13 for waste treatment methods.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Eye wash facilities must be available when handling this product. Containers should be kept tightly closed. Avoid contact with skin and eyes. All work must be carried out under well-ventilated conditions. Wash hands before breaks, before using restroom facilities, and at the end of work. Do not eat, drink or smoke during work.

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

 Revision date: 21/11/2019
 Version: 1.0.1

7.2. Conditions for safe storage, including any incompatibilities

Keep in tightly closed original packaging. Store in a dry, cool, well-ventilated area.

7.3. Specific end use(s)

Polymerise together with part A during heat emission. The product is corrosive. May cause sensitisation by skin contact.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: Contains no substances subject to reporting requirements

Legal basis: Not known for the mixture.

8.2. Exposure controls

Personal protective equipment, eye/face protection: Wear safety goggles/face protection. Eye protection must conform to EN 166.

Personal protective equipment, skin protection: Wear suitable protective clothing.

Personal protective equipment, hand protection: Wear gloves. Type of material: Nitrile rubber/ Butyl rubber. Penetration time of glove material: 3 hours. We have reduced the penetration time by a factor of 3, when the test standard EN 374-3 is done at 23°C, while the temperature inside the glove is approx. 35°C. In addition, the elastic material extends during use, thereby glove thickness and penetration time is reduced. Recommended thickness of the glove is ≥ 0.4 mm. Selection of the suitable gloves does not only depend on the material, but also on quality and these will vary between manufacturers.

Personal protective equipment, respiratory protection: In case of insufficient ventilation, wear respiratory protective equipment. Gas cartridge (organic substances).

Other Information: Wash hands before breaks, before using restroom facilities, and at the end of work. Take off contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	Tan.
Odour	Amine odour
Solubility	Miscible with the following: Organic solvents.
Explosive properties	No data
Oxidising properties	No data

Parameter	Value/unit	Remarks
pH (solution for use)	No data	
pH (concentrate)	No data	
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	> 150 °C	760mmHg
Flash Point	> 150 °C	
Evaporation rate	No data	
Flammability (solid, gas)	No data	

**Safety Data Sheet****MEDIUM HARDENER**

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

Flammability limits	No data	
Explosion limits	No data	
Vapour pressure	No data	
Vapour density	No data	
Relative density	No data	
Partition coefficient n-octanol/water	No data	
Auto-ignition temperature	> 150 °C	
Decomposition temperature	No data	
Viscosity	0.1 Pas	25°C
Odour threshold	No data	

9.2 Other information

Parameter	Value/unit	Remarks
Density	1,0 g/cm ³	20°C

Other Information: Solubility in water: Insoluble**SECTION 10: Stability and reactivity****10.1. Reactivity****10.2. Chemical stability**

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

May react under considerable heat buildup with epoxy.

10.4. Conditions to avoid

Avoid contact with the following: Oxidisers/ Strong acids.

10.5. Incompatible materials

Organic peroxide.

10.6. Hazardous decomposition products

Hazardous fumes are formed in fire conditions. Nitrous gases/ Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity - oral****Styrenerad fenol , cas-no 61788-44-1**

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg			

bicyklo[2.2.1]heptanebis(metylamine), cas-no 56602-77-8

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		961 mg/kg			

1,3-Benzenedimethanamine, cas-no 1477-55-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		930 mg/kg			

3-aminomethyl-3,5,5-trimethylcyclohexylamine, cas-no 2855-13-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

Rat	LD50		1030 mg/kg			
-----	------	--	------------	--	--	--

May give burning effects in mouth, throat and stomach.

Acute toxicity - dermal

1,3-Benzenedimethanamine, cas-no 1477-55-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		> 3100mg/kg			

Skin contact may cause irritation, redness and burns. Prolonged or repeated skin contact may cause allergic eczema.

Acute toxicity - inhalation

1,3-Benzenedimethanamine, cas-no 1477-55-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	4h	1.34 mg/l			

The amines in the hardener have a very low vapour pressure, but inhalation of high concentrations may cause irritation of mucous membranes, headache and nausea.

Skin corrosion/irritation: The product is corrosive.

Serious eye damage/eye irritation: Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.

Respiratory sensitisation or skin sensitisation: May cause reddening and sensitization or other allergic response.

SECTION 12: Ecological information

12.1. Toxicity

Styrenerad fenol , cas-no 61788-44-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute Daphnia		48h	EC50	1 - 10mg/l			
Acute algae		72h	EC50	3.14 mg/l			
Acute fish		96h	LC50	14.8 mg/l			

bicyklo[2.2.1]heptanebis(metylamine), cas-no 56602-77-8

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Crustacea	Daphnia magna	48h	EC50	31 mg/l			
Algae		72h		35 mg/l			

1,3-Benzenedimethanamine, cas-no 1477-55-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute Daphnia		48h	EC50	15.2 mg/l			
Acute algae		72h	EC50	20.3 mg/l			
Acute fish	Leuciscus idus	96h	LC50	87.6 mg/l			

3-aminomethyl-3,5,5-trimethylcyclohexylamine, cas-no 2855-13-2

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute Daphnia		24h	EC50	44 mg/l			
Acute algae		72h	EC50	37 mg/l			

No results from ecotoxicological tests are available. Ecotoxicological information only related to components.

12.2. Persistence and degradability

Not readily degradable.

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

12.3. Bioaccumulative potential

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Other adverse effects

May change the pH of the water. Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Destruction according to local regulations.

Disposal methods: May be disposed by mixing with the right amount of epoxy-resin.

Contaminated packaging: Put the empty container up-side-down. Use a tool to completely empty the container. Sort the waste according to local regulations.

Category of waste: 08 01 11* waste paint and varnish containing organic solvents or other hazardous substances
15 01 10* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN-No.:	3267	14.4. Packing group:	III
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,3-Benzenedimethanamine)	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Hazard identification number:	80	Tunnel restriction code:	E

Inland water ways transport (ADN)

14.1. UN-No.:	3267	14.4. Packing group:	III
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,3-Benzenedimethanamine)	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Transport in tank vessels:			

Sea transport (IMDG)

Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

14.1. UN-No.:	3267	14.4. Packing group:	III
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,3-Benzenedimethanamine)	14.5. Environmental hazards:	The product must be labelled as a Marine Pollutant (MP) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	8	Environmental Hazardous Substance Name(s):	
Hazard label(s):	8	IMDG Code segregation group:	Segr. grp. 18 - Alkalis (SGG18)
EmS:	F-A, S-B		

Air transport (ICAO-TI / IATA-DGR)

14.1. UN-No.:	3267	14.4. Packing group:	III
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,3-Benzenedimethanamine)	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Special Provisions: This product is assessed and classified in accordance with the requirements of the European Parliament and Council Regulation (EC) No 1272/2008 and subsequent amendments.

15.2. Chemical Safety Assessment

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.0.1	21/11/2019	SACPRO AB	Name change
1.0.0	07/11/2019	SACPRO AB	Approved

Abbreviations:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

Other Information:

The information contained herein is based on the best of our knowledge and shall describe



Safety Data Sheet

MEDIUM HARDENER

Replaces date: 07/11/2019

Revision date: 21/11/2019

Version: 1.0.1

our product under the aspect of safety. They are not meant to guarantee specific properties of the product. Recipients of our product must take responsibility for observing existing laws and regulations.

Classification method: Calculation based on the hazards of the known components.

List of relevant H-statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS is prepared by

Company:	SACPRO AB
Address:	Källviksvägen 10
Zip code:	791 52
City:	Falun
Country:	SWEDEN
E-mail:	info@sacpro.se
Phone:	+46 23 79 06 50
Document language:	GB