

SAFETY DATA SHEET



Product name:	PRONTOFIX HARDENER	Page:	1/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: PRONTOFIX HARDENER
Cat. No. 40200108, 40200110 (and mixed with ProntoFix Accelerator in the recommended ratio)

Container size: 280 ml, 500 ml

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

Application: For embedding and impregnation of materialographic specimens

Details of the supplier of the safety data sheet

Supplier: Struers Australia
27 Mayneview Street
Milton QLD 4064, Australia

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to: struers@struers.dk

Emergency telephone number

Australian Poisons Information Centre: 13 11 26.

+61 7 3512 9600
(Only during office hours)

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	2/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

WHS:

- Acute toxicity – oral – Category 4
- Skin corrosion/irritation - Category 1A
- Serious eye damage/eye irritation - Category 1
- Skin Sensitisation - Category 1
- Toxic to reproduction - Category 2
- Specific target organ toxicity (single exposure) - Category 3 (respiratory tract irritation)
- Chronic hazard to the aquatic environment - Category 1

Label elements



Danger

Contains:

- 4-tert-Butylphenol
- m-Phenylenebis(methylamine)
- Formaldehyde, reaction products with 1,3-benzenedimethanamine and tert-butylphenol
- 2-Methyl-1,5-pentamethylen-diamine
- Polyethylenepolyamines (*)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	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 regulations.

Other hazards

Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema.

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	3/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: Amines. (*)

WHS:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
25-<40	98-54-4	202-679-0	01-2119489419-21-xxxx	4-tert-Butylphenol	Skin Irrit. 2;H315 Eye Dam. 1;H318 Repr. 2;H361 STOT SE 3;H335 Aquatic Chronic 1;H410	
20-<30	1477-55-0	216-032-5	01-2119480150-50-xxxx	m-Phenylenebis (methylamine)	Acute Tox. 4;H302 Acute Tox. 4;H332 Skin Corr. 1B;H314 Skin Sens. 1;H317 Aquatic Chronic 3;H412	
15-<25	90640-67-8	292-588-2	-	Polyethylenepolyamines	Acute Tox. 4;H302 Acute Tox. 4;H312 Skin Corr. 1B;H314 Eye Dam. 1;H318 Skin Sens. 1;H317 Aquatic Chronic 3;H412	
15-<20	158800-93-2	-	-	Formaldehyde, reaction products with 1,3-benzenedimethanamine and tert-butylphenol	Acute Tox. 4;H302 Acute Tox. 4;H312 Skin Corr. 1B;H314 Skin Sens. 1;H317 Aquatic Chronic 2;H411	
5-<20	15520-10-2	239-556-6	01-2119976310-41-xxxx	2-Methyl-1,5-pentamethylenediamine	Acute Tox. 4;H302 Acute Tox. 4;H332 Skin Corr. 1A;H314	

References: The full text for all hazard statements is displayed in section 16.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	4/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation: Move injured person into fresh air immediately. Call an ambulance. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Bring these instructions.

Skin contact: Flush immediately with plenty of water and remove contaminated clothing. Call an ambulance, continue to rinse during transportation to hospital and bring these instructions.

Eye contact: Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital. Bring these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Special hazards arising from the substance or mixture

Specific hazards: During fire, gases hazardous to health may be formed.

Advice for firefighters

Protective equipment for fire-fighters: Use air-supplied respirator, gloves and protective goggles.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Protective equipment: Avoid inhalation of vapours and contact with skin and eyes. For personal protection, see section 8. (*)

Emergency procedures: No specific recommendations. For personal protection, see section 8. (*)

Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Dam and absorb spillages with sand, earth or other non-combustible material.

Reference to other sections

References: For personal protection, see section 8. For waste disposal, see section 13.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	5/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid inhalation of vapours and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Wash hands before breaks and before smoking, eating or drinking.

Technical precautions: Local exhaust is recommended. First-aid equipment, including eye wash bottle, must be available at the work site.

Conditions for safe storage, including any incompatibilities

Storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place.

Specific end use(s)

Specific use(s): No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
1477-55-0	m-Xylene- α,α' -diamine	-	0.1 mg/m ³	-	Sk	WES

Notes: Sk: Skin absorption.

Exposure controls

Engineering measures: Mix and prepare in a place with efficient exhaust ventilation. Observe occupational exposure limits and minimise the risk of inhalation. An eye wash bottle must be available at the work site. Provide access to washing facilities including soap, skin cleanser and fatty cream.

Personal protection: Personal protection equipment should be chosen according to relevant AS/NZS standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type ABEK

Hand protection: Use disposable gloves protecting against epoxy along with cotton gloves closest to the skin. Laminate (PE/EVOH) gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

Environmental Exposure Controls: Not available.

SAFETY DATA SHEET

Product name: PRONTOFIX HARDENER
Revision Date: 2018-12-07
Document No.: M0218

Page: 6/10
Print date: 2018-12-07
SDS-ID: AU-EN/2.0

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

(*)

<u>Form:</u>	Liquid.
<u>Colour:</u>	Yellowish.
<u>Odour:</u>	Amine.
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	Not available.
<u>Melting point:</u>	Not available.
<u>Boiling point:</u>	180 - 300°C
<u>Flash point:</u>	Not available.
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not available.
<u>Explosion limits:</u>	Not available.
<u>Vapour pressure:</u>	Not available.
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	0.99 - 1.00
<u>Solubility:</u>	Partially soluble in water.
<u>Partition coefficient (n-octanol/water):</u>	Not available.
<u>Auto-ignition temperature (°C):</u>	Not available.
<u>Decomposition temperature (°C):</u>	Not available.
<u>Viscosity:</u>	115 - 200 mPa*s
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	Not available.
<u>Other information</u>	
<u>Other data:</u>	No information available.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	7/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Reactivity: Reacts violently with strong oxidising substances.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

Hazardous Reactions: None under normal conditions.

Conditions to avoid

Conditions/materials to avoid: Moisture, heating and strong oxidising substances.

Incompatible materials

Incompatible materials: Oxidising materials. Strong acids.

Hazardous decomposition products

Hazardous decomposition products: When heated, toxic and corrosive vapours/gases may be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral): Harmful if swallowed.

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Causes severe burns.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: National Toxicology Program (NTP): No.
I.A.R.C. Monographs: No.

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

STOT - Single exposure: May cause respiratory irritation.

STOT - Repeated exposure: Based on available data the classification criteria are not met.

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

Inhalation: Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema.

Ingestion: Strongly corrosive. Even small amounts may be fatal. Symptoms are severe burning pains in mouth, throat and stomach.

Specific effects: No information available.

Toxicological data: m-Phenylenebis(methylamine):
LD50 (oral, rat): 930 mg/kg
LC50 (inhalation, rat): 1.34 mg/l

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	8/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity: Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Degradability: No data available.

Bioaccumulative potential

Bioaccumulative potential: 4-tert-Butylphenol: log Pow: 3
m-Phenylenebis(methylamine): log Pow: 0.18

Mobility in soil

Mobility: No data available.

Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other adverse effects

Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste and residues in accordance with local authority requirements.
For personal protection, see section 8.
Hazardous characteristics of waste: H8 (Corrosives) (*)
Note that fully cured material is not considered as hazardous waste.

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	9/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 14: TRANSPORT INFORMATION

UN number

UN-No: 2735

UN proper shipping name

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (2-Methyl-1,5-pentamethylen-diamine, m-Phenylenebis(methylamine))

Transport hazard class(es)

Class: 8

Packing group

PG: I

Environmental hazards

Marine pollutant: Yes.

Environmentally Hazardous substance: Yes.

Special precautions for user

Special precautions: None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: Not relevant.

SECTION 15: REGULATORY INFORMATION

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

Special provisions: AICS: Not available.

National regulation: Work Health and Safety Regulations 2011, with amendments.
National model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011), with amendments.
National model Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals (2011), with amendments.
Hazardous Waste (Regulation of Exports and Imports) Act 1989, with amendments.
Workplace exposure standards for airborne contaminants (2018).
The Industrial Chemicals (Notification and Assessment) Act 1989, as amended.

SAFETY DATA SHEET

Product name:	PRONTOFIX HARDENER	Page:	10/10
Revision Date:	2018-12-07	Print date:	2018-12-07
Document No.:	M0218	SDS-ID:	AU-EN/2.0

SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 2, 3, 6, 9, 13.

The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Allan Vorup

Additional information:

Classification according to WHS Regulations 2011:
Calculation method.

Wording of 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.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.
www.dhigroup.com.