

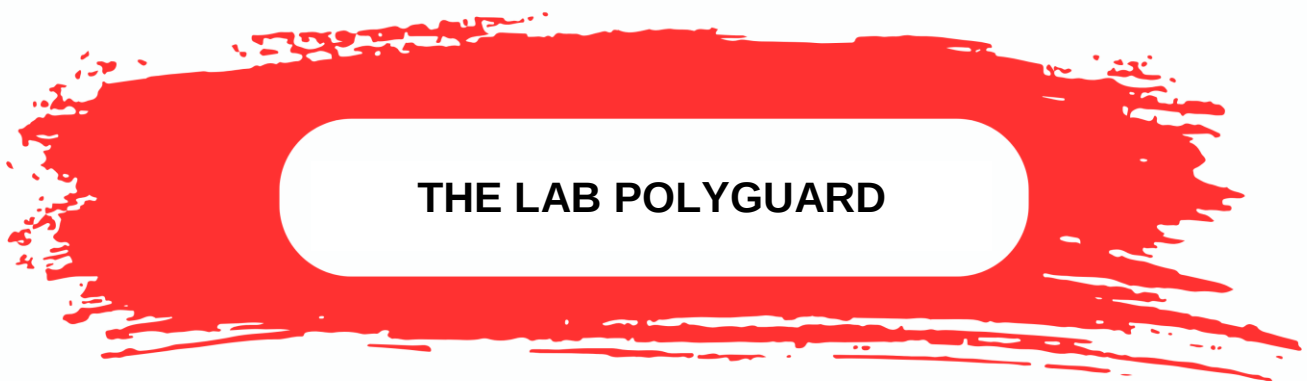
THE LAB®

Chemicals & Coatings



Technical and Material Safety Data Sheet

Version: 2026



THE LAB POLYGUARD

THE LAB POLYGUARD

Product Family: Twin Packs and Epoxies (Polyurethane Topcoat)

Typical System Guidance

System selection should be based on substrate type, substrate condition and service environment.

A typical coating system may consist of:

Concrete

1. THE LAB EPOXY PENETRATING PRIMER
2. THE LAB EPOXYCOAT 421
3. THE LAB POLYGUARD (1–2 coats depending on system requirements)

Steel

1. THE LAB EPOXY ZINC PHOSPHATE PRIMER
2. THE LAB POLYGUARD (1–2 coats depending on system requirements)

Routine inspection and maintenance are recommended to maintain long-term coating performance.

Product Description

THE LAB POLYGUARD is a twin-pack polyurethane coating designed as a durable protective topcoat for epoxy flooring and protective coating systems. The coating provides excellent gloss retention, UV resistance and chemical durability, making it suitable for both interior and exterior applications, including floor coating systems, roof coating systems, marine applications and protective industrial finishes. Once cured, the product forms a tough, flexible and highly resistant finish that

protects underlying epoxy systems while improving appearance and long-term performance. Polyguard can also be applied as a clear protective coating for timber and certain marine surfaces where durability, water resistance and UV stability are required. The coating is particularly effective as a finishing layer over epoxy coatings where improved weather resistance and long-term colour stability are needed.

Technical Data Summary

Product Type	Two Component Polyurethane
Finish	High Gloss
Mixing Ratio	4 : 1 (Base : Hardener)
Solids by Volume	+/- 51%
Typical Coverage	+/- 8–10 m ² /L
Film Thickness	+/- 60–100 microns
Pot Life	+/- 4 hours at 25°C
Over coating Time	+/- 4–8 hours depending on temperature
Full Cure	+/- 5 days at 25°C
Flash Point	+/- 30°C
Surface Temperature Limits	10 – 13 °C
Relative Humidity Limits	< 50°C
Storage Temperature	+5°C – 25°C
Shelf Life	+/- 12 months when stored under correct conditions

These values are typical laboratory results and serve as a guide only. Practical coverage will vary depending on surface profile, porosity and application method.

Intended Uses

THE LAB POLYGUARD is intended as a protective polyurethane topcoat for epoxy coating systems where enhanced UV resistance, chemical resistance and durability are required. It is commonly used in industrial flooring systems, protective coatings for steel structures, marine applications and as a clear varnish on wood surfaces. The coating provides a durable protective finish for surfaces exposed to weather, sunlight, moisture, marine environments and industrial chemical exposure.

Principal Characteristics

- High gloss durable polyurethane finish
- Excellent UV resistance and colour stability
- Good flexibility and impact resistance
- Very good chemical resistance
- Excellent water resistance
- Fast drying and quick return to service
- Compatible with epoxy coating systems
- Suitable for interior and exterior applications
- Excellent gloss and colour retention

Surface Preparation

All surfaces must be clean, dry and free from grease, dust, oil or other contaminants. Surfaces coated with epoxy systems must be fully cured before application of the polyurethane topcoat. Any contamination must be removed using appropriate cleaning agents followed by rinsing with clean water. Previously coated surfaces should be lightly abraded to ensure proper adhesion of the topcoat. Appropriate primers should be selected for concrete, steel, galvanised steel, aluminium, fibreglass and previously coated surfaces in accordance with the relevant system specification.

Application Guidelines

THE LAB POLYGUARD is supplied as a two-component system consisting of base and hardener. The components must be mixed in a ratio of four parts base to one part hardener. Mix thoroughly using mechanical mixing equipment until a uniform mixture is achieved. The coating can be applied using airless spray, brush or roller depending on the application requirements. Spray equipment should be adjusted to achieve even atomisation and uniform film thickness. Application should take place when substrate temperatures are between 10°C and 35°C and when surfaces are clean and dry.

Prior to application, always follow these basic product checks:

- Inspect packaging and ensure containers are sealed, undamaged and within shelf-life
- Open product and visually inspect for abnormalities, contamination, skinning or separation
- Stir product thoroughly before and during use where required
- For multi-component products, ensure correct mixing ratios and induction periods are followed
- Confirm substrate condition, moisture levels and environmental conditions are suitable
- Conduct a small test patch to confirm adhesion, appearance and compatibility prior to full application

Storage

Store in tightly sealed containers in a cool, dry and well-ventilated area away from heat sources, sparks and open flames. Containers should be protected from direct sunlight and stored between 5°C and 25°C. When stored correctly the product has a typical shelf life of 12 months.

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and exterior walls.



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floor systems for
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foundation for
lasting adhesion
and performance.



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surfaces with
advanced sealer
technologies.



TWIN PACKS & EPOXIES

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Engineered mortar
and coatings for
concrete protection.



DEGREASERS & SURFACE PREPARATION

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ensure maximum
adhesion.



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Specialised solutions
for the toughest
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Technical Advisory, Specification Support and Disclaimer

The technical information, recommendations, specifications and system guidance contained in this document are provided in good faith and are based on laboratory testing, field experience and current product knowledge available at the date of publication. Such information is intended solely to assist specifiers, contractors, applicators and end users in selecting and applying suitable coating systems and does not relieve any party from independently assessing product suitability for the intended application and site conditions.

The performance of any coating system is materially dependent upon factors beyond the control of The Lab Chemicals & Coatings, including but not limited to correct substrate assessment, cleaning and decontamination procedures, surface preparation, substrate condition, moisture content, environmental conditions, product storage and handling, mixing procedures where applicable, film thickness achievement, adherence to specified system build requirements, application techniques and ongoing maintenance practices.

Failure to strictly follow the instructions, specifications, limitations and recommendations contained within this Technical Data Sheet, associated specifications, written recommendations or supplementary documentation may adversely affect product performance and may invalidate performance expectations, warranties or related claims.

Users are strongly advised to conduct suitability trials and test applications under actual site conditions prior to full-scale application.

To the best of our knowledge, the information contained herein is true and accurate at the date of issue and remains subject to change without prior notice. Users are advised to contact The Lab Chemicals & Coatings prior to specification or ordering to ensure that the correct product and system are selected for the intended application.

No guarantee, representation or warranty is given or implied regarding the completeness or suitability of information contained herein. Technical recommendations and advice do not constitute a performance guarantee unless expressly confirmed in writing by an authorised representative of The Lab Chemicals & Coatings.

The Lab Chemicals & Coatings accepts no responsibility or liability for product failure, defects, damage, consequential losses, injuries or unsatisfactory performance arising from incorrect substrate preparation, unsuitable application conditions, deviation from specified system requirements, misuse, unauthorised product modification, incorrect application methods or use outside documented recommendations. Liability, if any, shall be limited solely to replacement of proven defective product.

The above information must be read in conjunction with the General Terms and Conditions of The Lab Chemicals & Coatings (Pty) Ltd and The Lab George (Pty) Ltd, available at: www.thelabcc.co.za or upon request.

Material Safety Data

BASE



SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

CAS no. : N/A

EC no. : N/A

UN No. : 1263 Hazchem: 3[Y]

SAPMA: 1-H-J

In emergency contact: The Lab Chemicals & Coatings @ 0845071767

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

EC Classification : - T R11,20/21,38, S2,36/37,13,43A,45,51,,62

HAZARDOUS AND/OR OTHER RELEVANT COMPONENTS

ACRYLIC RESIN >20%

[CAS #:] [E.C. #:]

EEC Labels: XN OEL 435mg OEL 100.ppm SUG S

XYLENE >20%

[CAS #: 1330-20-7] [E.C. #: 601-022-00-9]

EEC Labels: XN OEL 435mg OEL 100ppm STOEL 650.mg STOEL 150.ppm RL+ S

2-ETHOXY ETHYL ACETATE >0.5%

[CAS #: 111-15-9] [E.C. #: 607-037-00-7]

EEC Labels: T OEL 54mg OEL 10ppm CL S

(CL/RL = Controlled/Recommended level 'S' = Skin annotation)

SECTION 3. HAZARDS IDENTIFICATION

SAPMA Health Rating: 1-MODERATE – Temporary or minor injury likely unless prompt action taken and treatment given

Inhalation: HARMFUL. Excessive exposure to this material must be avoided.

Skin: HARMFUL BY CONTACT.

Eyes: Highly Irritating and risk of irreversible damage.

Ingestion: Harmful. May cause lung damage if swallowed.

Medium to long term environmental effects. Contain, collect & remove.

SECTION 4. FIRST AID MEASURES

Inhalation: Move to fresh air. In case of discomfort seek medical attention.

Skin: Use hand cleaner/soap & water. Remove contaminated clothing. If any discomfort get medical attention

Eyes: ACT FAST! Rinse immediately with plenty of water. Refer immediately to Doctor.

Ingestion: DO NOT INDUCE VOMITING. Get immediate medical attention.

SECTION 5. FIRE FIGHTING MEASURES

Flammable with toxic fumes.

Containers can burst in a fire. Can form explosive vapour/air mixture. Static discharge hazard!

Foam. CO2. Dry powder. Fog to cool and control. Do NOT use water jets.

Cool containers in case of fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES - SEE ALSO SECTIONS 5, 8, 13

Contain & collect. Use an inert - NOT sawdust. Keep out of drains & sewers.

SECTION 7. HANDLING AND STORAGE

No open flames. No smoking.

Keep containers cool. Avoid free fall of liquid - use earthing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

SAPMA Rating: 1-H-J PPE: Full cover with hood

Inhalation: In case of insufficient ventilation, use suitable respiratory protection.

Skin: Avoid direct contact. Use barrier cream and impervious gloves.

Eyes: Use goggles. Avoid direct contact.

Ingestion: Observe the rules of hygiene. Wash before eating or drinking.

OEL Type: Mix- Mixture - See Section 2 Skin annotation



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical class : PAINT Description : Viscous liquid Smell : Pungent

Boil. pt (C) : >35 FlashPoint (C) : >23

SECTION 10. STABILITY AND REACTIVITY

Stable under normal conditions

Could generate static - USE EARTHING

Inert - no reaction with fire-fighting water

SECTION 11. TOXICOLOGICAL INFORMATION

No carcinogenic, mutagenic or genetic effects established.

SECTION 12. ECOLOGICAL INFORMATION

Medium to long term environmental effects. Contain, collect & remove.

SECTION 13. DISPOSAL INFORMATION

Hazardous. Use reputable waste disposal contractors. Destroy used containers.

SECTION 14. TRANSPORT INFORMATION

UN no : 1263 Packing group : III IMO Class : 3.3 Marine Pollutant Class : 1 Hazchem : 3[Y]



SECTION 15. REGULATORY INFORMATION

Classification: Flammable, F, Harmful, Xn.

R11- Highly Flammable

R20/21 - Harmful by inhalation and contact with the skin

R65 - Harmful: May cause lung damage if swallowed.

R37 - Irritating to the respiratory system

S1/2 - Keep locked up and out of the reach of children. (Retail sales items)

S36/37 - Wear suitable protective clothing and gloves

S13 - Keep away from food, drink and animal feeding stuffs

S43A - In case of fire, use water fog, foam or powder - Do not use water jets!

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

S51 - Use only in well ventilated areas

S62 - If swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.



SECTION 16. OTHER INFORMATION

IN CASE OF ANY DISCOMFORT ALWAYS SEEK MEDICAL ADVICE.

ALERT WORKERS TO THIS HAZARD POTENTIAL AND ENSURE PRECAUTIONS ARE TAKEN.

ACTIVATOR



SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

CAS no. : N/A

EC no. : N/A

UN No. : 1263 Hazchem: 3[Y]

SAPMA: 2-H-E

In emergency contact: The Lab Chemicals & Coatings @ 0845071767

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

[- R10][Xn R20/21][Xn R42][,N R52/53]

EC Classification : - Xn N R10,20/21,42,52/53 S36/37,02,13,23,43A,46,51,56,59

HAZARDOUS AND/OR OTHER RELEVANT COMPONENTS

Toluene Diisocyanate Prepolymer >25%

[CAS #: 26471-62-5] [E.C. #: 615-006-00-4]

EEC Labels: T+ N STOEL 0.070mg CL S

XYLENE <12.5%

[CAS #: 1330-20-7] [E.C. #: 601-022-00-9]

EEC Labels: XN OEL 435mg OEL 100ppm STOEL 650.mg STOEL 150.ppm RL+ S

(CL/RL = Controlled/Recommended level 'S' = Skin annotation)

SECTION 3. HAZARDS IDENTIFICATION

SAPMA Health Rating: 2-MODERATE - Temporary or minor injury possible even if treatment given

Inhalation: Irritating and narcotic. Can affect CNS. Possible Sensitizer.

Skin: HARMFUL BY CONTACT.

Eyes: Highly Irritating and risk of irreversible damage.

Ingestion: Harmful if swallowed. Can affect CNS. Systemic poison.

No carcinogenic, mutagenic or genetic effects established

May cause undesirable effects to aquatic organisms.

Inhalation Sensitizer

SECTION 4. FIRST AID MEASURES

Inhalation: Move to fresh air. In case of discomfort seek medical attention.

Skin: Use hand cleaner/soap & water. Remove contaminated clothing. If any discomfort get medical attention

Eyes: ACT FAST! Rinse immediately with plenty of water. Refer immediately to Doctor.

Ingestion: Wash mouth with plenty of water. Do NOT induce vomiting. Seek medical advice.

SECTION 5. FIRE FIGHTING MEASURES

Flammable with toxic fumes.

Containers can burst in a fire. Can form explosive vapour/air mixture. Static discharge hazard!

Foam. CO2. Dry powder. Fog to cool and control. Do NOT use water jets.

Cool containers in case of fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES - SEE ALSO SECTIONS 5, 8, 13

Contain & collect. Use Inert NOT sawdust. Keep waste separate for disposal.

SECTION 7. HANDLING AND STORAGE

No open flames. No smoking.

Keep containers cool. Avoid free fall of liquid - use earthing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

SAPMA Rating: 2-H-E PPE: Respirator and Eye protection

Inhalation: Use air supplied respirator or hood.

Skin: Avoid direct contact. Use barrier cream and impervious gloves.

Eyes: Use goggles. Avoid direct contact.

Ingestion: Observe the rules of hygiene. Wash before eating, drinking or smoking.

OEL Type: Mix- Mixture - See Section 2 Skin annotation

Inhalation Sensitizer



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical class: PAINT Description: Viscous liquid Smell: Pungent

Boil. pt (C) : >35 FlashPoint (C) : >23

SECTION 10. STABILITY AND REACTIVITY

Stable under normal conditions

Could generate static - USE EARTHING

Inert - no reaction with fire-fighting water

SECTION 11. TOXICOLOGICAL INFORMATION

No carcinogenic, mutagenic or genetic effects established

SECTION 12. ECOLOGICAL INFORMATION

May cause undesirable effects to aquatic organisms.

SECTION 13. DISPOSAL INFORMATION

Hazardous. Use reputable waste disposal contractors. Destroy used containers.

SECTION 14. TRANSPORT INFORMATION

UN no: 1263 Packing group: II IMO Class: 6.1

Hazchem: 3[Y]



SECTION 15. REGULATORY INFORMATION

EC no. : N/A Contains: TOLUENE DI-ISOCYANATE

EC Classification : - Xn N R10,20/21,42,52/53 S36/37,02,13,23,43A,46,51,56,59

R10 - Flammable

R20/21 - Harmful by inhalation and contact with the skin

R42 - May cause sensitisation by inhalation

R52/53 - Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

S36/37 - Wear suitable protective clothing and gloves

S2 - Keep out of reach of children. (Retail sales items)

S13 - Keep away from food, drink and animal feeding stuffs

S23 - Do not breathe gas/fumes/vapour/spray (SEE TEXT) (appropriate wording to be specified by the manufacturer)

S43A - In case of fire, use water fog, foam or powder - Do not use water jets!

S46 - If swallowed seek medical advice immediately and show this container or label

S51 - Use only in well ventilated areas

S56 - Do not discharge into drains or the environment, dispose to an authorised waste collection point

S59 - Refer to manufacturer/supplier for information on recovery/recycling



SECTION 16. OTHER INFORMATION

THIS SUBSTANCE IS A POTENTIAL SENSITISER - ENSURE PRECAUTIONS ARE TAKEN.

IN CASE OF ANY DISCOMFORT ALWAYS SEEK MEDICAL ADVICE.

This MSDS conforms to General Administrative Regulations of 6 Sept.1996 (ISO-11014/ANSIZ400.1.1996)

OELs derived from OHS Act Regulations for Dangerous Chemical Substances of 25 Aug.1995 (EH-42)

SAPMA Rating - South African Paint Manufacturers Association Guide to Health Hazards (SABS ARP 006:1991) all information is given in good faith but without guarantee in respect of accuracy. No responsibility is accepted for errors or omissions or the consequences thereof.