



DESCRIPTION

TOPGUARD is two-pack acrylic polyurethane topcoat with excellent gloss and retention designed for exterior. It has excellent durability and adhesion, excellent chemical resistance and abrasion resistance.

TYPICAL USE

TOPGUARD as a topcoat over an epoxy primer for UV light resistance for factory floor, chemical processing plants, warehouse, factory, food, beverage plants bridge, chemical tank, outside of steel structure chemical plant and ship.

PRODUCT DATA

- **Components** : Binders, pigments, additives and solvents
- **Color** : Refer to catalogue
- **Paint film appearance** : Gloss
- **Solid by volume** : 56 ± 2 %
- **Theoretical coverage** : 7.5 – 11.2 m²/liter/coat
Actual surface coverage will be depended on spreading ability of paint film, dry film thickness, surface irregularities, technique and wastage during painting.
- **Volatile organic compounds (VOCs)** : ≤ 300 g/L
- **Flash point** : appx.35°C
- **Drying time (at relative humidity (RH) 50% & dry film thickness (DFT) 60µm):**

○ Surface temperature	25°C	30°C	35°C
○ Surface dry (touch dry)	3h	2h	1.5h
○ Hard dry	8h	7h	5h
○ Painting interval, minimum	3h	2h	1.5h
○ Pot life	10h	8h	6h

Actual drying time and painting interval time may be longer or shorter than provided data, depended on environmental temperature, dry film thickness, ventilation, humidity and number of coating applied, etc.

RECOMMENDED PAINT FILM SYSTEM:

SYSTEM	PRODUCT	COAT(S)	DRY FILM THICKNESS
<i>For metal surfaces:</i>			
Primer	Rusttech, Or Epoguard Primer, Or Shark Epoxy Primer	1	100µm
Topcoat	Topguard	2	50µm
<i>For concrete surface:</i>			
Primer	Epoguard Varnish	1	50µm
Topcoat	Topguard	2	50µm

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APPLICATION INSTRUCTION

▪ SURFACE PREPARATION

➤ **Steel:**

- Should be blast cleaned in accordance with NACE No.2 / SSPC-SP10 / ISO 8501:1 / SIS Sa 2.5
- And/or by use the surface preparation with requirements of the primer and/or as the Spec of the project.

Remark: The surface must be thoroughly dry and the protective coating applied within 4 hours to cleaned surface.

➤ **Wall:**

+ For new concrete:

- The concrete should be laid on nylon sheets or HDPE to block moisture from underground.
- Left the concrete for curing to solid and dry for about 3-4 weeks. Then, clean the surface from dust, dirt, grease and most importantly, the surface is completely dry. (Check moisture content must not exceed 4%)

+ For old concrete:

- Remove old paint film at areas that loose adhesion to as much as possible by Scraping with a shovel or Grinding machine to enhance adhesion. Then, clean the surface from dirt, grease and most importantly, the surface is completely dry. (Check moisture content must not exceed 4%).

➤ **Before Recoat by Topcoat:**

- Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning before coating.
- If primer / first topcoat layer was applied over last 7 days, gives surface cleaning by sand paper no. 320-400 then follow SSPC-SP1, Solvent Cleaning before next coat applied.
- Surface repair (cracks, pores, holes) done with suitable materials and polishing of surface with suitable equipments.

▪ MIXING RATIO

Mixing ratio	Part A	Part B
By volume	4	1
By weight	5	1

Stir well Part A and Part B separately.

To ensure painting system achieves drying time and designed physical properties, recommended mixing ratio should be strictly followed.

Gradually pour Part B into Part A, stir well in 2 – 3 minutes with dedicated stirrer until homogeneous. Leave the mixture for stabilization in 5 minutes before applying.

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▪ APPLICATION

Equipment / methods:

Brush, roller, conventional spray, airless spray

For airless spray gun:

- Nozzle tip size : 0.012" – 0.019"
- Angle to the surface : 65° – 80°
- Pressure at nozzle : 140 – 190 Kg/cm² (2.000 – 2.600 Psi)

Paint film thickness:

	Min	Standard	Max
- Dry film thickness (DFT):	50µm	60µm	75µm
- Wet film thickness (WFT):	89µm	107µm	134µm

Film thickness will vary and is calculated as average.

Dilution ratio:

Paint is ready to use after proper stirring until homogeneous.

Add in **maximum 5% TOA PU thinner #43** if thinning is necessary.

Dilution percentage is depending on ambient temperature, relative humidity, paint film thickness, equipment and application method.

CERTIFICATION

TCVN 9013:2011 – National technical regulation on Polyurethane paint certified.

QCVN 08:2020/BCT – National technical regulation on the limits of lead content in paints certified.



HANDLING AND STORAGE

The product must be stored in accordance with national regulations.

Store in a dry, cool, good ventilation area; far from heat, open flame, flammable materials.

Tightly closed when not in use.

Keep out of reach of children.

Stir well before use, paint should be used up when lid opened.

Storage temperature is recommended at 25°C – 30°C.

Do not apply when temperature is lower than 15°C or higher than 40°C.

Do not apply when relative humidity exceeds 75%.

Surface temperature should be at least 3°C higher than the dew point of the air.

HEALTH AND SAFETY

Please do not handle until all safety precautions have been read and understood.

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Keep away from heat, sparks, open flame, hot surface. No smoking.

Wear protective gloves, respirator, eye protection, protective clothing.

Avoid contact with skin, eyes or ingestion. Go right to the nearest health center for help in case of ingesting paint or paint contacts with eyes.

Avoid release to the environment. Treat discarded paint according to environmental law.

See more guidelines in the Safety Data Sheet.

PACKAGING

	net volume (liter)	volume of container (liter)
TOPGUARD Part A	3 4 16	3.785 5 20
TOPGUARD Part B	0.785 1 4	0.8 1 5

SHELF LIFE

24 months from manufacturing day when stored at 25°C – 30°C

DISCLAIMER

The information in this data sheet is given to the best of TOA's knowledge based on laboratory testing and practical experience. However, as the product is often used under conditions beyond our control, TOA cannot guarantee anything only the quality of the product itself. TOA reserves the right to change given data without notice.

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