

# MasterSeal® Traffic 2500 Primerless

High-solids polyurethane waterproofing, traffic bearing membrane systems for vehicular and pedestrian areas

## PACKAGING

- MasterSeal M 270 NP: 4.66 gal (17.6 L) kits
- MasterSeal TC 275: 4.78 gal (18.1 L) kits
- MasterSeal TC 295: 5.25 gal (19.8 L) kit

## YIELD

Please consult system application for product coverage information

## COLORS

Gray, Charcoal, Black

## STORAGE

Store unopened containers in cool, clean, dry area

## SHELF LIFE

MasterSeal M 270 NP, TC 275, TC 295: 1 year when properly stored

## DESCRIPTION

MasterSeal Traffic 2500 Primerless is a fluid-applied polyurethane waterproofing system. MasterSeal Traffic 2500 Primerless uses a fast-setting two-component reactive curing mechanism. It has a very low odor and is VOC compliant.

MasterSeal Traffic 2500 Primerless is composed of:

- MasterSeal M 270 NP—a two-component fast-curing polyurethane base coat with outstanding mechanical properties, including excellent elongation.
- MasterSeal TC 275—a two-component fast-curing aromatic polyurethane topcoat with outstanding mechanical properties, including high tensile strength and excellent tear and abrasion resistance.
- MasterSeal TC 295 (exterior applications)—a high performance, two-component aliphatic, high solids urethane waterproofing membrane designed as a topcoat for the MasterSeal Traffic 2500 Primerless.

## PRODUCT HIGHLIGHTS

- Two-component system provides faster setting times, even in cooler climates, to help reduce facility downtime
- Low odor/high solids allow MasterSeal Traffic 2500 Primerless to be used over or near inhabited structures; Non-flammable and solvent-free
- Seamless waterproof membrane helps protect concrete from freeze/thaw damage; protects occupied spaces below from water damage and has no seams that may result in leaks
- Excellent chloride resistance to protect against chloride intrusion, extending the life of reinforcing steel
- Excellent chemical resistance helps protect against common parking deck chemicals including gasoline, diesel fuel, oil, alcohol, ethylene glycol, de-icing salt, bleach and cleaning agents
- Provides skid resistance to increase safety and offers excellent durability and superior abrasion resistance

## VOC CONTENT

- MasterSeal M 270 NP Part A: 4 g/L less water and exempt solvents, when components are mixed
- MasterSeal M 270 NP Part B: 5 g/L less water and exempt solvents, when components are mixed
- MasterSeal TC 275 Part A: 71 g/L less water and exempt solvents, when components are mixed
- MasterSeal TC 275 Part B: 13 g/L less water and exempt solvents, when components are mixed
- MasterSeal TC 295 Part A: 0 g/L less water and exempt solvents when components are mixed
- MasterSeal TC 295 Part B: 5 g/L less water and exempt solvents when components are mixed

**Technical Data**

**Composition**

MasterSeal Traffic 2500 Primerless is a two-component polyurethane membrane.

**Compliances**

- CSA S413
- ASTM C 957

**Typical Properties**


PROPERTY	VALUE
<b>Solids content, %</b>	
MasterSeal M 270 NP	99
MasterSeal TC 275	99
MasterSeal TC 295	90
<b>Viscosity, cps*</b>	
MasterSeal M 270 NP	3,400
MasterSeal TC 275	1,600
MasterSeal TC 295	2,500–4,000
<b>Working Time, min*</b>	
MasterSeal M 270 NP	20 ± 5
MasterSeal TC 275	20 ± 5
MasterSeal TC 295	30 ± 10
<b>Initial cure, hrs</b>	
MasterSeal M 270 NP	3–4
MasterSeal TC 275	3–4
MasterSeal TC 295	4–8

\*Tested at 73° F (23 °C) and 50% relative humidity. Warm temperatures will shorten pot life. Cold temperatures will increase viscosity. Plan work accordingly.

**Test Data**

PROPERTY	RESULTS	SPECIFICATIONS	TEST METHOD
<b>Crack bridging</b> , MasterSeal M 270 NP	Passes	No cracking	ASTM C 957
<b>Adhesion</b> (Pull-off), psi MasterSeal M 270 NP	400	—	ASTM D 4541
<b>Tensile strength</b> , psi (MPa),			ASTM D 412
Base Coat	3,000 (20.7)	Control	
MasterSeal TC 275	3,000 (20.7)	Control	
MasterSeal TC 295	2,980 (20.6)	Control	
<b>Elongation</b> , %,			ASTM D 412
Base Coat	950	Control	
MasterSeal TC 275	30	Control	
MasterSeal TC 295	250	Control	
<b>Hardness</b> , Shore A			ASTM D 2240
MasterSeal TC 275	70	—	
MasterSeal TC 295	92	—	
<b>Taber abrasion resistance</b> , mgms; CS-17 Wheel, 1,000 g load, 1,000 cycles, MasterSeal M270 NP/TC275	100	—	ASTM D 4060
<b>Taber abrasion resistance</b> , mgms; CS-17 Wheel, 1,000 g load, 1,000 cycles, MasterSeal M 270 NP / TC 275 / TC 295	47	—	ASTM D 4060

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.



**SEALANT • WATERPROOFING  
& RESTORATION INSTITUTE**

**Issued to: BASF Corporation**  
**Product: MasterSeal Traffic 2500**

**ASTM D 412:** Tensile Strength of Top Coat  
MasterSeal TC 275 Top Coat: Tensile Strength: 2,600 psi;  
Elongation: 26%  
MasterSeal TC 295 Top Coat: Tensile Strength: 3,200 psi;  
Elongation: 410% Pass ✓

**ASTM D 4541:** Adhesion of Base Coat  
MasterSeal M 265 w/ Primer P 255  
Pull-off Adhesion: 400 psi + Pass ✓

**ASTM D 4060:** Abrasion Resistance of Top Coat  
MasterSeal TC 275 Top Coat: Abrasion Resistance:  
135 mgms loss – mgms loss/1,000 cycles  
MasterSeal TC 295 Top Coat: Abrasion Resistance:  
57 mgms loss – mgms loss/1,000 cycles Pass ✓

**Validation Date:** 3/1/18-2/28/23

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**DECK COATING VALIDATION**  
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## APPLICATIONS

- Interior or exterior, above grade
- Mechanical rooms
- Balconies
- Plaza decks
- Elevated concrete slabs
- Plywood decks/balconies

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## INDUSTRIES/SECTORS

- Stadiums
- Parking Garages
- Commercial Construction
- Building and Restoration

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## HOW TO APPLY

### SURFACE PREPARATION

#### CONCRETE

1. Concrete must be fully cured (28 days), structurally sound, clean and dry (ASTM D 4263). All concrete surfaces (new and old) must be shot blasted to remove previous coatings, laitance and all miscellaneous surface contamination and to provide profile for proper adhesion. Abrasive shot blasting must occur after concrete repair has taken place. Acid-etching is not permitted. Proper profile should be a minimum of ICRI CSP-3 (as described in ICRI document 03732.) For balconies and other pedestrian areas with limited space or access for shot-blasting, alternative mechanical methods can be used to achieve the recommended surface profile.
2. Repair voids and delaminated areas with BASF branded cementitious and epoxy patching materials. For application when fast-turn repairs are required, MasterSeal 350 can be used to repair patches up to 1.5" in depth when used in aggregate slurry mix. Please refer to the MasterSeal 350 Technical Data Guide for proper application techniques.
3. All units must be applied within the specified pot life.

### SURFACE PRE-STRIPING AND DETAILING

1. For non-moving joints and cracks less than  $\frac{1}{16}$ " (1.6 mm) wide, apply 25 wet mils (0.6 mm) pre-striping of MasterSeal M 270 NP. MasterSeal M 270 NP must be applied to fill and overlap the joint or crack 3" (76 mm) on each side. Feather the edges.

2. Dynamic cracks and joints over  $\frac{1}{16}$ " (1.6 mm) wide must be routed to a minimum of  $\frac{1}{4}$  by  $\frac{1}{4}$ " (6 by 6 mm) and cleaned. Install bond breaker tape to prevent adhesion to bottom of joint. Prime joint faces only with MasterSeal P 173 and fill with MasterSeal SL 1™, SL 2™, NP1™ or NP2™. For joints deeper than  $\frac{1}{4}$ " (6 mm), use appropriate backer rod. For cracks, sealant should be flush with the adjacent surface. For expansion joints, sealant should be slightly concave. After the sealant has cured, apply 25–30 wet mils (0.64–0.77 mm) of MasterSeal M 270 NP pre-striping over the cured sealant, overlap the joint 3" (76 mm) on each side.
3. Sealed joints 1" (25 mm) wide or less can be coated over with the MasterSeal Traffic system. Expansion joints exceeding 1" (25 mm) wide, including the primary wide expansion-joint system, are not to be coated so they can perform independently of the deck coating system.
4. Form a sealant cant into the corner at the junction of all horizontal and vertical surfaces (wall sections, curbs, columns) by priming with MasterSeal P 173 and applying a 1" (25 mm) wide bead of MasterSeal NP 1 or MasterSeal NP 2. Tool to form a 45° cant. Apply masking tape to the vertical surfaces 4–5" (102–127 mm) above the sealant cant to provide a clean termination of the vertical detail coat. After the sealant has cured, apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP over the cured cant up to the masking tape and 4" (102 mm) onto deck surface.
5. Where the coating system will be terminated and no wall, joint, or other appropriate break exists, cut a  $\frac{1}{4}$  by  $\frac{1}{4}$ " (6 by 6 mm) keyway into the concrete. Fill and coat keyway during application of MasterSeal M 270 NP.

#### PLYWOOD

1. All plywood must be smooth-faced tongue and groove, APA-stamped and exterior grade. Construction must conform to code, but plywood must not be less than  $\frac{23}{32}$ " (18 mm) thick. Plywood spacing and deck construction must follow APA guidelines.
2. Surfaces must be free of contaminants.

3. All seams must be caulked with MasterSeal NP 1 or MasterSeal NP 2 sealants. Pre-stripe 4–6" (102–152 mm) wide with 25 wet mils (0.64 mm) of Base Coat. Reinforce all seams between plywood sheets and between flashing and the plywood deck by embedding MasterSeal 995 reinforcing fabric into the pre-striping. Provide appropriate cant with MasterSeal NP 1 or MasterSeal NP 2 to eliminate 90° angles.

## MIXING AND APPLICATION

### BASE COAT (MasterSeal M 270 NP)

1. Precondition both A and B components to a temperature of approximately 70 °F (21 °C).
2. Add entire contents of Part A to Part B. Mix components with a slow-speed drill for a minimum of 3 minutes. Scrape down sides and bottom of mixing vessel, then mix again for 2 minutes. Keep the mixing paddle submerged during mixing to avoid adding air into the mixture.
3. Apply at a rate of 25 wet mils (0.64 mm) 55–60 ft<sup>2</sup>/gal (1.35–1.47 m<sup>2</sup>/L) using a proper notched squeegee and backroll.
4. Apply Base Coat only to those areas that can be recoated within 24 hours with top coat. Allow base coat to cure 3–4 hours before applying Top Coat.
5. Working time is approximately 20 minutes at 70 °F (21 °C). Higher temperatures will shorten working time.

### TOPCOAT (MasterSeal TC 275/TC 295)

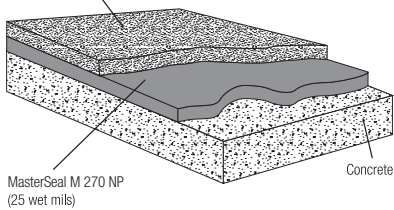
1. Precondition both A and B components to a temperature of approximately 70 °F (21 °C).
2. Add entire contents of Part A into Part B. Mix components with a slow-speed drill (400–600) rpm, for a minimum of 3 minutes. Scrape down sides and bottom of mixing vessel, then mix again for 2 minutes. Keep the mixing paddle submerged during mixing to avoid adding air into the mixture.

## APPLICATION OF SYSTEMS

MasterSeal Traffic 2500 Primerless can be installed in several configurations, depending upon the degree of traffic to which the system is exposed. In areas of extreme traffic (turning lanes, pay booths, entrances and exits), apply the Extra Heavy-Duty Traffic System. The following summary briefly describes each configuration. All coverage rates are approximate.

**LIGHT TO MEDIUM DUTY TRAFFIC AND PARKING STALLS**

MasterSeal TC 275 or TC 295 (15–20 wet mils) with MasterSeal 941 or equivalent broadcast and backrolled into the wet top coat

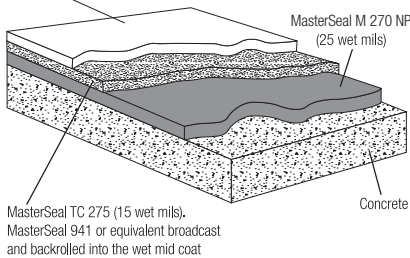


**LIGHT-MEDIUM TRAFFIC AND PARKING STALLS**

1. Apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP with proper notched squeegee at the rate of approximately 55–60 ft<sup>2</sup>/gal (1.35–1.47 m<sup>2</sup>/L). Allow base coat to cure 3–4 hours.
2. Apply 15–20 wet mils (0.38–0.51 mm) of MasterSeal TC 275/TC 295 at the rate of 80–100 ft<sup>2</sup>/gal (1.96–2.45 m<sup>2</sup>/L).
3. Immediately broadcast MasterSeal 941 aggregate or 16–30 mesh, rounded silica sand at the rate of 15–20 lbs/100 ft<sup>2</sup> (0.75–1.0 kg/m<sup>2</sup>) into TC275/TC295 and backroll to encapsulate.
4. Allow minimum curing time of 24–48 hours before allowing vehicular traffic onto the coating. Allow a minimum of 3–4 hours for pedestrian traffic

**HEAVY DUTY TRAFFIC SYSTEM**

MasterSeal TC 275 or TC 295 at 15–20 wet mils



**HEAVY DUTY TRAFFIC SYSTEM**

1. Apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP with proper notched squeegee at the rate of approximately 55–60 ft<sup>2</sup>/gal (1.35–1.47 m<sup>2</sup>/L). Allow base coat to cure 3–4 hours.
2. Apply 12–20 wet mils (0.30–0.51 mm) of MasterSeal TC 275/TC 295 intermediate topcoat using a properly notched squeegee at the rate of approximately 80–130 ft<sup>2</sup>/gal (1.96–3.19 m<sup>2</sup>/L). Immediately back roll to evenly level Top Coat. The next step, #4, can utilize either method described in 4A or 4B.
- 3A. **AGGREGATE TO REFUSAL METHOD**  
Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand

into the wet coating at the rate of 20–30 lbs per 100 ft<sup>2</sup> (1.0–1.5 kg/m<sup>2</sup>). Immediately after the aggregate is broadcast and while the coating is still wet, blow any excess aggregate via a portable blower forward into the wet coating. Do not overapply aggregate; it is acceptable to have localized wet spots in the aggregate surface after completion of this method. This process requires coordination between all members in the work crew. The blower operator, wearing clean spiked shoes, should blow the excess aggregate forward towards the freshly applied and backrolled topcoat. In this method, the coating should not accept additional sand, minimal excess aggregate is on the surface, less aggregate is used and the textured appearance should be fairly uniform.

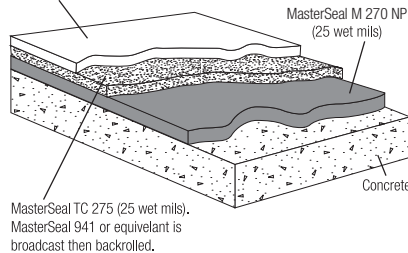
**3B. BROADCAST AND BACKROLL METHOD**

Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating and backroll to encapsulate the aggregate. Evenly broadcast aggregate at the rate of 15–20 lbs/100ft<sup>2</sup> (0.75–1.00 kg/m<sup>2</sup>).

4. Remove all excess or loose aggregate by sweeping or vacuuming
5. Ensure there is no moisture on the surface of the aggregate/membrane before application of topcoat. Apply 15–25 wet mils (0.38–0.64 mm) of MasterSeal TC275/295 at the rate of 60–100 ft<sup>2</sup>/gal (1.47–2.21 m<sup>2</sup>/L) using a flat squeegee. Immediately back roll to evenly level topcoat.
6. Immediately broadcast MasterSeal 941 or equivalent at the rate of 3–5 lbs/100 ft<sup>2</sup> (0.15–0.25 kg/m<sup>2</sup>). Lightly backroll into top coat.
7. Allow minimum curing time of 24–48 hours before allowing vehicular traffic onto the coating. Existing environmental conditions effect the allowable time period.

**EXTRA HEAVY-DUTY TRAFFIC SYSTEM**

MasterSeal TC 275 or TC 295 at 15–20 wet mils



**EXTRA HEAVY TRAFFIC SYSTEM**

1. Apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP with a proper notched squeegee at the rate of approximately 55–60 ft<sup>2</sup>/gal

(1.35–1.47 m<sup>2</sup>/L). Immediately backroll to level base coat. Allow base coat to cure 3–4 hours.

2. Apply 25 wet mils (6.4 mm) of MasterSeal TC 275/TC 295 intermediate topcoat using a properly notched squeegee at the rate of approximately 55–60 ft<sup>2</sup>/gal (1.35–1.47 m<sup>2</sup>/L). Immediately backroll to evenly level topcoat. The next step, #4, can utilize either method described in 4A or 4B.

**3A. AGGREGATE TO REFUSAL METHOD**

Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating at the rate of 20–35 lbs/100 ft<sup>2</sup> –1.0–1.75 kg/m<sup>2</sup>). Immediately after the aggregate broadcast and while the coating is still wet, blow any excess aggregate via a portable blower forward into the wet coating. Do not over apply aggregate; it is acceptable to have localized wet spots in the aggregate surface after completion of this method. This process requires coordination between all members in the work crew. The blower operator, wearing clean spiked shoes, should blow the excess aggregate forward towards the freshly applied and backrolled topcoat. In this method, the coating should not accept additional sand, minimal excess aggregate is on the surface, less aggregate is used and the textured appearance should be fairly uniform.

**3B. BROADCAST AND BACKROLL METHOD**

Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh rounded silica sand into the wet coating and backroll to encapsulate the aggregate. Evenly broadcast aggregate at the rate of 15–25 lbs/100 ft<sup>2</sup>/gal (0.75–1.25 kg/m<sup>2</sup>).

4. Remove all excess or loose aggregate by sweeping or vacuuming.
5. Ensure there is no moisture on the surface of the aggregate/membrane before application of topcoat. Apply 15–25 wet mils (0.38–0.64 mm) of MasterSeal TC275/295 at the rate of 60–100 ft<sup>2</sup>/gal (1.46–2.21 m<sup>2</sup>/L) using a flat squeegee. Immediately backroll to evenly level topcoat.
6. Immediately broadcast MasterSeal 941 or equivalent at the rate of 3–5 lbs/100 ft<sup>2</sup> (0.15–0.25 kg/m<sup>2</sup>). Lightly backroll into top coat.
7. Allow minimum curing time of 24–48 hours before allowing vehicular traffic onto the coating. Existing environmental conditions effect the allowable time period.

**IMPORTANT NOTE:** All coverage rates are approximate and may vary due to the application technique used. Coverage rates are affected by substrate texture, choice

and distribution of aggregate, intermediate aggregate load and environmental conditions and application methods and are not under the control of BASF. Ensure that an adequate amount of aggregate is utilized to achieve required slip resistance. Exterior applications must utilize MasterSeal TC 295 at the specified coverage rate of 15–20 wet mils.

#### MOCKUP

1. Provide mockup of at least 100 ft<sup>2</sup> (9.3 m<sup>2</sup>) to include surface profile, sealant joint, crack, flashing and juncture details and allow for evaluation of slip resistance and appearance of MasterSeal Traffic 2500 Primerless.
2. Install mockup with specified coating types and with other components noted.
3. Locate where directed by architect.
4. Mockup may remain as part of work if acceptable to architect.

#### CLEAN UP

Clean all tools and equipment immediately after use with MasterSeal 990 or xylene. Cured material must be removed mechanically.

#### FOR BEST PERFORMANCE

- MasterSeal NP 100 and MasterSeal NP150 should not be used in conjunction with this urethane deck coating system due to potential for curing issues.
- If vapor drive is present or suspected, please consult with your local BASF representative prior to system application.
- MasterSeal TC 275, TC 295, and M 270 NP have very short working times. Once the material has been mixed, the coating must be poured onto the surface and applied immediately.
- MasterSeal TC 275 will discolor if exposed to UV light.
- Minimum application temperature is 40 °F (4 °C). Contact technical support when temperatures are above 90 °F (32 °C).
- If areas of inadequate slip resistance exist, an additional top coat backrolled with aggregate is required.
- Do not apply to concrete that is outgassing.
- Warm temperatures will shorten working time; plan work accordingly.

- Concrete should have a minimum compressive strength of 3,000 psi (21 MPa) and be cured for a minimum of 28 days.
- Do not apply MasterSeal Traffic 2500 Primerless to concrete slabs on grade, unvented metal pan decks and split slab applications with a membrane between slabs.
- Select the proper type and amount of aggregate to achieve desired slip resistance.
- The best method to ensure the proper wet film thickness is the use of a grid system. Divide the surface to be coated into grids and calculate the square footage of each. Refer to the coverage chart to determine the quantity of coating needed for each grid to arrive at the required mil thicknesses. For example, one pail of MasterSeal M 270 NP should cover approximately 255–280 ft<sup>2</sup> or a minimum grid of 16 x 16 ft at 25 wet mils. Verify via site mockup.
- Avoid application of MasterSeal Traffic 2500 Primerless traffic deck coatings when inclement weather is present or imminent.
- Do not apply MasterSeal Traffic 2500 Primerless to damp, wet or contaminated surfaces.
- Substrate temperature must be more than 5 °F above dew point during application and cure.
- MasterSeal Traffic 2500 Primerless is not suitable for use where chained or metal-studded tires will be used.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- On steep ramps in excess of 15%, contact your local BASF representative. Do not use self-leveling grade product on slopes greater than 15%.

#### HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting [www.master-builders-solutions.basf.us](http://www.master-builders-solutions.basf.us), e-mailing your request to [basfbscst@basf.com](mailto:basfbscst@basf.com) or calling 1(800)433-9517. Use only as directed.

**For medical emergencies only,  
call ChemTrec® 1(800)424-9300.**

#### LIMITED WARRANTY NOTICE

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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