

# UNCONTROLLED

## MASTERSHIELD M90 MV (PART A) RESIN

ChemWatch Material Safety Data Sheet  
Issue Date: Thu 11-Oct-2001

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### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT NAME

MASTERSHIELD M90 MV (PART A) RESIN

#### SYNONYMS

epoxy resin      bisphenol- A epichlorohydrin epoxy resin  
condensate Part- A  
M- 90              Cobblestone Paving

#### PRODUCT USE

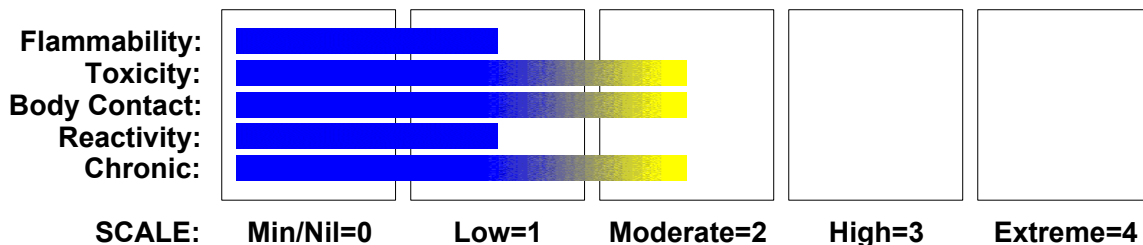
Clear or pigmented sealer for concrete floors and a binder for Polymer Flooring. Base or Part A of a 2 pack epoxy system. Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing Before starting consider control of exposure by mechanical ventilation

#### SUPPLIER

Company: Cobblestone Paving Australia P/L  
Address:  
PO Box 2057  
Burleigh Mdc, Gold Coast  
QLD, 4220  
AUS

Company: Cobblestone Paving Australia P/L  
Address:  
45 Alex Fisher Drive  
Burleigh Gardens  
QLD, 4220  
AUS  
Telephone: +61 7 5593 7766  
Fax: 07 5593 7777

#### HAZARD RATINGS



### Section 2 - HAZARDS IDENTIFICATION

#### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.**

According to the Criteria of NOHSC, and the ADG Code.

continued...

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## Section 2 - HAZARDS IDENTIFICATION ...



### POISONS SCHEDULE

S5

### RISK

Harmful by inhalation, in contact with skin and if swallowed.  
Irritating to eyes and skin.  
May cause SENSITISATION by skin contact.  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
May produce discomfort of the respiratory system\*.  
Possible respiratory sensitiser\*.  
May be harmful to the foetus/ embryo\*.  
May possibly affect fertility\*.  
\* (limited evidence)

### SAFETY

Keep container in a well ventilated place.  
Avoid exposure - obtain special instructions before use.  
To clean the floor and all objects contaminated by this material, use water and detergent.  
Keep container tightly closed.  
Keep away from food, drink and animal feeding stuffs.  
Take off immediately all contaminated clothing.  
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.  
If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).  
If you feel unwell contact Doctor or Poisons Information Centre. (Show the label if possible).

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
bisphenol A/ epichlorohydrin resin, liquid epoxide terminated oligomeric compound	25068-38-6	>60
(C12-14)alkylglycidyl ether	68609-97-2	10-30
organic solvents unregulated		<1

## Section 4 - FIRST AID MEASURES

### SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor.
- If swallowed do NOT induce vomiting.
  - If vomiting occurs, lean patient forward or place on left side (head-down)

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## Section 4 - FIRST AID MEASURES ...

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position, if possible) to maintain open airway and prevent aspiration.

- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

### EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

### NOTES TO PHYSICIAN

Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.

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## Section 5 - FIRE FIGHTING MEASURES ...

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- If safe to do so, remove containers from path of fire.

### FIRE/EXPLOSION HAZARD

- Combustible.
  - Slight fire hazard when exposed to heat or flame.
  - Heating may cause expansion or decomposition leading to violent rupture of containers.
  - On combustion, may emit toxic fumes of carbon monoxide (CO).
  - May emit acrid smoke.
  - Mists containing combustible materials may be explosive.
- Other combustion products include carbon dioxide (CO<sub>2</sub>) and aldehydes

### FIRE INCOMPATIBILITY

Avoid contamination with strong oxidising agents as ignition may result.

Avoid reaction with amines, mercaptans, strong acids and oxidising agents

### HAZCHEM

None

### Personal Protective Equipment

Glasses:  
Safety Glasses.  
Chemical goggles.

Gloves:  
General purpose rubber glove.  
PVC chemical resistant type.  
Nitrile.  
Neoprene.

Respirator:  
Type A-P Filter of sufficient capacity

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

#### MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water

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## Section 6 - ACCIDENTAL RELEASE MEASURES ...

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course.

- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

## EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

other than mild, transient adverse effects without perceiving a clearly defined odour is:

American Industrial Hygiene Association (AIHA)

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

Avoid cross contamination between the two liquid parts of product (kit). If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur. This excess heat may generate toxic vapour.

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

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## Section 7 - HANDLING AND STORAGE ...

### SUITABLE CONTAINER

Plastic drum.

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

### STORAGE INCOMPATIBILITY

Avoid reaction with amines, mercaptans, strong acids and oxidising agents

### STORAGE REQUIREMENTS

- Store in original containers.
  - Keep containers securely sealed.
  - No smoking, naked lights or ignition sources.
  - Store in a cool, dry, well-ventilated area.
  - Store away from incompatible materials and foodstuff containers.
  - Protect containers against physical damage and check regularly for leaks.
  - Observe manufacturer's storing and handling recommendations.
- Store between 5 deg.C and 35 deg.C.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

None assigned. Refer to individual constituents.

### ODOUR SAFETY FACTOR (OSF)

OSF=0.54 (bisphenol A/ epichlorohydrin resin, liquid)

Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities
B	26-550	As "A" for 50-90% of persons being distracted
C	1-26	As "A" for less than 50% of persons being distracted
D	0.18-1	10-50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As "D" for less than 10%

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

of persons aware of being tested

### INGREDIENT DATA

For each of the following  
BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:  
(C12-14)ALKYLGLYCIDYL ETHER:  
No exposure limits set by NOHSC or ACGIH

### PERSONAL PROTECTION



#### EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

#### HANDS/FEET

- Barrier cream and Nitrile rubber gloves or Neoprene rubber gloves or Rubber Gloves or PVC gloves.
- Protective footwear.  
DO NOT use solvent to clean the skin .
- Skin cleansing cream.

#### OTHER

- Overalls.
- Ensure that there is ready access to eye wash unit

### ENGINEERING CONTROLS

Use in a well-ventilated area.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:  
solvent, vapours, degreasing etc.,  
evaporating from tank (in still air)  
aerosols, fumes from pouring  
operations, intermittent container  
filling, low speed conveyer transfers,  
welding, spray drift, plating acid  
fumes, pickling (released at low  
velocity into zone of active  
generation)  
direct spray, spray painting in shallow

Air Speed:  
0.25-0.5 m/s (50-100 f/min)

0.5-1 m/s (100-200 f/min.)

1-2.5 m/s (200-500 f/min)

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)

grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Pale yellow, low viscosity liquid with a very mild odour; does not mix with water.

### PHYSICAL PROPERTIES

Liquid.  
Does not mix with water.  
Sinks in water.

Molecular Weight: Mixture  
Melting Range (°C): Not available.  
Solubility in water (g/L): Immiscible  
pH (1% solution): Not applicable  
Volatile Component (%vol): 0  
Relative Vapour Density (air=1): >1  
Lower Explosive Limit (%): Not applicable

Boiling Range (°C): >200  
Specific Gravity (water=1): 1.10  
pH (as supplied): Not applicable  
Vapour Pressure (kPa): Negligible  
Evaporation Rate: Non Vol. @ 38C  
Flash Point (°C): >155  
Upper Explosive Limit (%): Not applicable

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ...

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Autoignition Temp (°C): Not available.  
State: Liquid

Decomposition Temp (°C): >200

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Overexposure is unlikely in this form.

Considered an unlikely route of entry in commercial/industrial environments.

The material is discomforting to the gastro-intestinal tract and harmful if swallowed

##### EYE

The material is moderately discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/ or other transient eye damage/ ulceration.

The material may produce moderate eye irritation leading to inflammation.

Repeated or prolonged exposure to irritants may produce conjunctivitis.

##### SKIN

The material is moderately discomforting to the skin and is capable of causing skin reactions and may cause in some cases, sensitisation , from a single acute exposure or from repeated exposures over long periods.

Epoxy materials may cause allergic and/or contact dermatitis responses, which may occur on exposure or may become apparent only after repeated exposures.

Sensitisation is possible. Photoallergic dermatitis may result from contact with the material. This type of response can be elicited only in individuals who have been previously allergically sensitised to the chemical agent and appropriate radiation. Photoallergic dermatitis presents, clinically, as an eczematous dermatitis in sun-exposed areas.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

Sensitisation reactions may appear suddenly after repeated symptom free exposures.

The material may accentuate any pre-existing skin condition.

Open cuts, abraded or irritated skin should not be exposed to this material

##### INHALED

Not normally a hazard due to non-volatile nature of product.

Inhalation hazard is increased at higher temperatures.

The vapour is mildly discomforting to the upper respiratory tract and repeated exposure may cause sensitisation and/or allergic reactions.

Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

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## Section 11 - TOXICOLOGICAL INFORMATION ...

Inhalation of vapour may result in nausea, headache

### CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by skin contact and inhalation of vapour from the curing material. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

### Mastershield M90 MV (Part A) Resin

Not available. Refer to individual constituents.

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

TOXICITY IRRITATION

Data for liquid polymer, ie for molecular weights generally less than 700

for bisphenol A monomer with epichlorohydrin (mol. wt. 320.84)

Dermal (mouse) TDLo: 16600 mg/kg/2Y/l Nil reported

for bisphenol A dimer with epichlorohydrin (mol. wt. 641.68)

Nil reported Nil reported

for bisphenol A polymer with epichlorohydrin

Oral (rat) LD50: 11400 mg/kg Eye (rabbit): 100 mg - mild

CAUTION: Epoxy resin products may contain sensitising glycidyl ethers.

(C12-14)ALKYLGLYCIDYL ETHER:

TOXICITY

IRRITATION

Oral (rat) LD50: 17000 mg/kg

Oral (rat) LD50: > 10000 mg/kg

Skin (rabbit): moderate

Skin (human): Irritant

Skin (g-pig): sensitiser

Skin (human): non-sensitiser

Eye (rabbit): mild [Ciba] I

[Ciba] abbit)ri?

## Section 12 - ECOLOGICAL INFORMATION

No data for Mastershield M90 MV (Part A) Resin.

Refer to data for ingredients, which follows:

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

No data for bisphenol A/ epichlorohydrin resin, liquid.

(C12-14)ALKYLGLYCIDYL ETHER:

No data for (C12-14)alkylglycidyl ether.

## Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.

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## Section 13 - DISPOSAL CONSIDERATIONS ...

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- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.
  - Extreme caution should be taken when heating the resin/curing agent mix.
  - Recycle containers where possible, or dispose of in an authorised landfill.
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## Section 14 - TRANSPORTATION INFORMATION

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Shipping Name:

NONE

Dangerous Goods Class: None

UN/NA Number: None

ADR Number:

Packing Group: None

Labels Required:

Additional Shipping Information:

International Transport Regulations:

IMO: None

## HAZCHEM

None

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## Section 15 - REGULATORY INFORMATION

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### POISONS SCHEDULE

S5

### REGULATIONS

No data available for bisphenol A/ epichlorohydrin resin, liquid (CAS: 25068-38-6).

No data available for bisphenol A/ epichlorohydrin resin, liquid (CAS: 25085-99-8).

applies to the following ingredients:

No data available for bisphenol A/ epichlorohydrin resin, liquid (CAS: 25068-38-6).

No data available for (C12-14)alkylglycidyl ether (CAS: 68609-97-2).

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## Section 16 - OTHER INFORMATION

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